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STUDIES IN PEDAGOGY.

BY

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INDIANA NORMAL SCHOOL.

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PREFACE.

It is fully appreciated that there are many books written during the present times for which there not only is no demand, but for which there is no excuse. The present little volume is not born of any desire to produce a book on pedagogy better than any yet written. It is, however, prompted by a desire to choose from the field of pedagogical science material well adapted to a special class of students, with which the writer has to deal in his daily teaching.

The field of pedagogy is so large that material must be selected from it for those students who are just beginning the study of pedagogy. So it has been the aim in this little volume to select from this broad field and organize such material as is best adapted to students beginning this line of work. At the same time material has been selected whose study, it is believed, will be of substantial worth to teachers in giving them an insight into the nature of the teacher's profession as well as knowledge valuable for guidance in teaching. While simplicity has been aimed at as much as possible, no effort has been made to avoid the most fundamental problems of pedagogy.

This book is prepared for the special purpose of use as a text-book in my own classes. Much which is the result of the most recent investigations along pedagogical lines is here arranged in a teachable and convenient form. Thus the study is brought up to date.

An effort has been made to show where the present studies articulate with psychology, child-study and methods.

G. W. N.

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INTRODUCTION.

Pedagogy.—This word is sometimes thought to name some particular school subject, the study of which will enable those who wish to teach school to do their work better than they could do it without such study. It is thought by some who have given it no special attention to name a subject as definite, with regard to the truths it teaches, as arithmetic, grammar, or physiology. Such, however, is a wrong conception of the meaning of the term *pedagogy*, as well as a wrong conception of the nature of the subject. Pedagogy is a term which names a group of subjects that have to do with both the science and art of education, and is not properly to be thought as naming any particular subject.

The word *pedagogy* is derived from the Latin word *paedagogus*, which meant a boy-leader, or a child-leader. From its original meaning it appears that it should mean something that has to do with leading children from a condition in which their unpreparedness for living is the greatest to one of worthy manhood and womanhood. And this is the correct use of the term, for it indicates the nature of the subject. Used in this sense pedagogy names a group of subjects which are called professional sub-

jects. That is to say, they are subjects which teachers should study with the special view of becoming more skillful in the art of teaching. Pedagogy thus embraces *psychology, child-study, methods, history of education, and philosophy of education.*

Guyan a French educational writer speaks as follows concerning the nature of pedagogy: "Pedagogy might be defined as the art of adapting new generations to those conditions of life which are the most intensive and fruitful for the individual and the species." This definition emphasizes the art phase of pedagogy, but it also has an important science phase.

It will thus appear that the field of study which offers itself to us as teachers is a broad one, and one from which materials especially suited to our purpose must be chosen. It further appears that to become to any great extent proficient in the study of pedagogy will require time. Educational ideals have grown till it is no longer believed that one or two terms in pedagogy is to be regarded as a panacea for all educational ills. This becomes evident when we think that to know pedagogy to any great extent is to know psychology, child study, methods, history of education, and philosophy of education.

CHAPTER I.

THE SCHOOL.

The Beginning Point.—From the view-point of the teacher all study of pedagogy centers around and is connected with the school. The term pedagogy is so closely connected with the school, and they have been associated together to such an extent that this term always suggests the school in some of its various phases. For this reason pedagogy has come to be regarded as a strictly professional line of work. A more or less extended study of it is the teacher's distinctly professional preparation. So as a starting place in the study of pedagogy, it seems eminently fitting to begin with the school as a whole, since it is the institution in which the pupil and teacher meet in the educating process.

The Nature of the School.—Among the ancients the school was a place of leisure, but it can scarcely be called that now. The school is an organization, but it gives us little or no help to know this unless the idea of the organization is well understood.

The study of the human body as a typical example of an organization, or organism, will reveal pretty well the thought sought for here. A some-

what careful study will show the following points are here to be found:

1. A complex whole.
2. The whole made up of individual parts.
3. The parts have a harmonious working relation.
4. The parts all work for one common end.
5. The whole is self-acting and self-adjusting.

The body considered as a whole is a one thing, but it is complex and not simple or homogeneous. The individual parts in this case are the organs of the body, —the hands, the feet, the skin, the heart, the stomach, etc. All these organs work so as to help one another. Thus the hands help to care for the feet; the feet help to carry the hands from place to place; the feet and hands help to secure food to nourish the skin, heart and stomach as well as themselves; the stomach helps to digest the food, and the heart pumps the blood enriched by the digested food to all parts of the body. All these parts do their work in such a way that, while each one does its own particular work well, it in no way hinders any other part, but also facilitates its work. If any part should work against any other part for a time, the organism would become impaired; if continued, it means the destruction of the organism by breaking down the unity of parts. The common end for which all the parts here work is the life of the body as a whole, which is, also, the life of each part. In the case of the human body it is worth note that it,

when out of order, tends to adjust itself, and naturally in most cases actually does adjust itself; also, that it is self-active. That is, it has the power of originating its own activity—the power of causing itself to act. This analysis of the human body as an example of an organization reveals to us the essential ideas in any organization as we wish in our work to think it.

It will prove beneficial to the student to take other examples of the organization and analyze them with the purpose of finding the essential ideas in an organization. For example, the maple tree, the geranium, and the family are good types for analysis.

Then, when we say the school is an organization, we are saying it is a collection of individual parts, self-adjusting and self-acting, working harmoniously together for one common end. Thus the pupils, the teacher, the school curriculum, the school officers, the patrons, etc., are the individual parts; and the one common end toward which they are harmoniously working is the freedom of the pupils physically, intellectually, aesthetically, socially, morally and religiously.

The school, the church, the family, the state, society and business life are organizations that are usually called the institutions. These six institutions are the six lines along which civilization has grown. A further study of the institution, the school, leads us into a discussion of the origin of the institutions, and particularly the origin of the school.

Origin of the School.—The school had its origin in what is known as differentiation of institutions. But this statement gives us no help unless we have well in mind the meaning of differentiation. Herbert Spencer tells us that differentiation is the law of all progress. That is to say, where differencing or division of structure or labor goes on there is progress, and where this does not go on progress is not to be found.

Illustration.—The lowest forms of life are small animals and plants each consisting of but one small cell of protoplasm which does in a way the work that all the organs of higher living forms do for them. Thus this one cell performs all the functions of digestion, circulation, assimilation, muscular action, etc., that are performed by the organs of higher forms of life. In these little living beings there is almost no differentiation of structure or function. But a little higher form of animal or plant life has many cells, some rudimentary digestive organs, and circulatory organs; and, also, a rudimentary muscular or supporting system. The higher up in the scale of animal or plant life the more definite are the separate organs, and the more is their labor divided. For instance, the robin or the primrose each has a definite set of organs for the performance of a definite set of functions. That is to say, they have a high degree of differentiation, while the one-celled forms have none or almost none. This means progress. For, when

an organ has but one kind of work to do, it can do that better than it can do many kinds of work because it has more energy to spend upon it.

Differentiation of Institutions.—There was a time in primitive society during the childhood of the race when only one of these fundamental institutions of civilization was in existence. This institution was the family. It then had much work to do. It had to protect the children from enemies, both wild beasts and man, to furnish food, clothing and shelter. It had to educate the children in so far as they were educated; to furnish religious services, and provide means of enjoyment for leisure hours. With these manifold duties to perform the family could not be expected to do any of them very well, and we know that was true. The protection furnished was poor; the food, clothing, and shelter were poor; the religion was crude and oftentimes immoral; the education of the children was neglected, and the pleasures were gross and degrading. It could not be any other way under those conditions.

It may seem strange that it is so, but history teaches us that there was first a felt-need for the organization, the church, after the family. And when there is a strong felt-need for anything, the thing is thus produced that will satisfy this need. It will help the student to think out illustrations of this. So after the family came the church as the first institution differentiated from the family. It states it truly

to say the church had its origin in the idea that it as an institution could furnish gratification for man's religious impulses better than the family could. If this had not been true, the church would have had no reason for coming into existence.

The next institution differentiated was doubtless the school. It grew out of the idea that it could educate the children better than could be done by the family or the church, or by both. So the school had its origin in the thought that it as an institution could do the work of educating the children better than any other institution. This was the idea that created it, and it is the sole purpose of the school to realize this idea. It is the function of everything to realize the idea that created it, and the school accords to this law.

Illustration.—It may be truly said that the idea which created the cotton-gin was the idea of some machine to separate the cotton fiber from the seed. And it is the purpose or function of the cotton-gin to realize this idea; that is, to do the work of separating the cotton fiber from the seed. This we know it does well, and the fact that it does it well is what has kept the cotton-gin in existence.

The origin of the state, business life, and society may be accounted for in the same way; that is, they arose in the process of differentiation of the institutions. It is, however, our purpose here to study the origin of the school only.

Differentiation in the School. The first school was,

doubtless, a very simple and primitive affair. It probably consisted of a few students congregated under the shade of some primitive tree to receive instruction from one who occupied the place of teacher. It is within the memory of men living that the school was very simple. The house was a log cabin, the curriculum was reading, writing, spelling, and arithmetic. The country school was Common school, High school, Academy, Normal school, Technical school, College and University. But from this simple beginning by differentiation our schools have become quite complex and elaborate. There has been differentiation at any rate along four lines; in the school as a whole, in the work of the teacher, in the curriculum, and in grading. Once there was nothing but the Common schools, but now there are High schools, Normal schools, Colleges, Universities, etc., each with its own special work to do. Once a teacher taught every thing in a school course, but now there is a special teacher for each subject. The curriculum once consisting of reading, writing, spelling, and arithmetic is now changed by differentiation to one consisting of the mathematical group, the language group, the history group, the science group and the art group, a quite complex and extensive affair. And lastly differentiation has brought about grading in our schools. The teacher in the first schools taught all grades. This is now changed, for the tendency is toward but one or two grades for a teacher.

This differentiation in all lines means progress. It means a saving of time and energy. It is just as true in the school as in any kind of life that division of labor means progress.

Illustration.—Suppose the farmer, in addition to producing farm products, had to make his own machinery, grind his wheat and corn for flour and meal, tan the skins and make his boots and shoes, do his own carpenter work, saw his lumber, produce cotton, wool and flax, weave it into cloth for clothing, be his own doctor, dentist, lawyer, teacher, and preacher, none of these could be done so well as they are now when this labor is divided up among many persons. Time and energy would be lacking to do so many kinds of work well. Also, there is not only more energy to put on any one kind of work when labor is differentiated, but any one doing just one or two lines of work becomes more skillful than he could become when doing many kinds of work, and, accordingly, will do his work much better.

The origin of the school thus made pretty clear in the study of the differentiation of institutions, the next point that invites our study is the elements of the school.

The Elements of the School.—It has been said that the school is a complex whole; that is, a whole made up of many parts, or elements. These elements may be divided into two classes, and these classes may consistently be named:

1. Necessary elements.
2. Supplementary elements.

The necessary elements are those without which the school can not exist. The school is for the pupil, and without the pupil there can be no school. So the pupil is the first and most important of the necessary elements of the school. The pupil makes necessary a teacher. While a school can not exist without the pupil, no more can it exist without the teacher. The school finds the idea that created it in the process of fulfillment in the teaching act. But to have the teaching act requires the teacher. So the teacher is to be named as another one of the necessary elements of the school. While the mind of the pupil is the thing to be taught always, it can not be taught without some subject or subjects for it to exercise upon. So a third element, the subjects of the school course, is, also, an absolute necessity. The term used to designate the school subjects,—reading, writing, spelling, geography, history, etc.,—taken as a whole, is the *school curriculum*. With these three elements, the pupil, the teacher, and the curriculum a school may exist. Take away any one or more and the school can not exist.

Almost every school possesses other elements that contribute to the efficiency of the work the school has to do, but which are not absolutely necessary to the existence of the school. These are the elements that have been called supplementary ele-

ments. They are the school officials, the parents, and the material equipments. The school officers are the directors, trustees, members of the school boards, superintendents of county, city, and state, the commissioners of education, and, in a sense, the legislators, governors, and president. The material equipments are school houses, school furniture, laboratories, library, apparatus, and school premises.

Both these classes of elements may exist, however, and there still be no school. In order that there may be a school these elements, whether necessary or supplementary, few or many, must be in harmony with the law of the organization. *This law is the law of unity.* In order to understand this statement well, two words in it need special study. These are the words, *law* and *unity*.

Law.—A law is a truth that belongs to a large number of particular cases. Thus it is a law that plants require sunshine, moisture, and air for their growth. This is a truth that belongs to a large number of individual plants, and these are the particular cases. It will help the student to think out other illustrations of law.

Unity. This means oneness in thought and purpose here. It means harmony in work. It is the harmonious working relation in the organism. Thus there is unity between student and teacher when they both are working with the same thought in mind to accomplish the same end. There is unity between

parent and teacher when they are agreed as to the end to be attained in school work, and are also agreed as to the means of reaching the desired end.

This law of unity is the fundamental law of the school. With the law of unity intact the school moves forward without a jar towards the accomplishment of its work—the education of the pupil. With the law broken there is discord and friction. The teacher, the student, the parent, or the school officers may break the law of the school—the law of unity. When any one does so, he breaks a rule of the school; for the rules of the school are but different phases of the law of unity. He who breaks the law of unity in the school either intentionally or unintentionally is a sinner. He has committed an educational sin.

Further Material for Study.—After studying the school as an institution, it remains to us to study the work the school has to do; and, also, to study carefully the necessary elements of the school together with the organization. These will be studied in succeeding chapters.

The purpose of the school is one with the end or object of education; so a study of this leads to a study of the nature and purpose of education. The nature and purpose of education will constitute the subject-matter of study in the next chapter.

CHAPTER II.

THE WORK THE SCHOOL HAS TO DO.

The Problem.—The work the school has to do is to educate the pupil. But what is it to educate the pupil? What sort of condition is the pupil to be in when he is educated? What is the meaning of what is called an education? These are some of the questions that suggest themselves at the outset of the study. The real problem sums itself up in the problem of the purpose of the school, and since the purpose of the school is one with the purpose of education, the problem is, the object to be reached in the educating process. That is to say, the question we have to answer is, What is the aim of education?

The Problem Answered.—There is scarcely an educational writer of note who has not dealt with this problem and who has not answered it in a way satisfactory to himself, to say the least. It will be helpful to consider some of these answers to this all important question.

Complete Living. Mr. Herbert Spencer, doubtless the greatest living thinker, says the aim of education is *complete living*. This, when analyzed, means treating the body right; treating the mind right; managing one's affairs right; rearing a family right;

behaving right as a citizen; and spending one's leisure time right. This seems a broad and comprehensive view of the aim of education. There seems to be no kind of human activity in life that this view of the aim of education does not touch. Granting that this is the true aim of education, then instruction in our schools, if in harmony with this aim, must give the pupil knowledge that will guide him in these six kinds of activities. There must be knowledge gained that will furnish guidance in treating the body right; in treating the mind right; in managing one's affairs right; in rearing a family right; in behaving right as a citizen; in spending one's leisure time right. The schools in their present condition fall far short of realizing this comprehensive aim. There is scarcely anything in many of our school courses that has as its specific purpose to furnish knowledge that will give guidance in treating the mind right. And again the school course is almost entirely devoid of any work that will give knowledge to furnish guidance in rearing a family. Doubtless much in the school courses has such a remote connection with knowledge that gives guidance in any of the six lines of human activity indicated, that the time spent upon it could be spent ten times more profitably some other way. That is to say, in the light of the above purpose of education we have not a *rational* school curriculum yet. This point will be treated at length, however, in Chapter VI, under the head of *the school curriculum*.

Rational Freedom.—Mr. Arnold Tompkins holds that the aim of education is *rational freedom*. Rational freedom means “the power to choose and live in the highest good.” This means freedom to choose and do that which will in every instance lift one to a higher plane of life in contradistinction to doing as one pleases regardless of the effect it has upon himself and his fellow-men. Some fancy their freedom taken away from them when they are prohibited from doing those things which by degrees bind veritable shackles of slavery upon them. This in the light of rational freedom is not freedom but bondage.

Illustration.—A man claims his freedom gives him the right to partake of intoxicating drink to the extent that he becomes drunken. He raises a cry and hue, if one says the law against drunkenness should be enforced, and says his freedom is restricted. His freedom is not restricted, but the license to make a slave of himself is the thing upon which the restriction falls. If he were free, he would know the evil effects of intemperance, and would choose to be temperate, and would have the force of character to realize his choice.

So it appears that rational freedom really reduces itself to a synonym for the ability to live completely.

Harmony of Intense Individual Life with the Social Consciousness of the Race.—The view of Mr. Jno. Dewey as to the end of education is, the highest development of the individual's powers in harmony with the life of

the race. That is to say, the individual is to have his powers developed to the highest extent in coming to share in the intellectual and moral resources which the human race has succeeded in collecting. This means that the aim of education is individual development to the extent that the power of choosing and living the highest good both for the individual and for the social life of the race, is attained. And when this is attained the condition of life will be the same as Herbert Spencer means by complete living.

Strong Moral Character.—Mr. Charles A. McMurry discusses the question, *the aim of education*, in his work on “General Method,” and arrives at the conclusion that it is to produce *strong moral character*. This means again power to choose and live the highest good. In order to have strong moral character one must possess the ability to think out the right and wrong in human activity. One is not likely as a rule to do better than he knows. He may do so, however, by accident, but to be able to act right, presupposes the development of the thinking powers to the extent that correct judgments of right and wrong may be formed. So to say that strong moral character is the aim of education does not mean that knowledge getting together with the ability to think is to be slighted at all. On the other hand, one thing that it does mean is, that there must be power of thought, but it further means that this power must be regulated and directed to righteous ends. To say that a

man always has good motives is not equivalent to saying that a man has strong moral character. The Fijian considers murder an action of the highest honor, and feels, evidently, that he has not done his highest duty till he has killed some one. Although some might say the act was a moral act because the motive seemed good to the Fijian, none, probably, would say the act was the result of strong moral character. Similarly, the Turcoman regards theft as meritorious, as shown by the fact that he makes pilgrimages to the tombs of noted robbers to make offerings to their departed spirits. In the same manner the Egyptian thinks it praiseworthy to lie without any further object than that he may become skillful in the art of lying. According to a class of moral thinkers, called Intuitionists, these acts, murder, theft and lying, are moral acts, if the agent performs them with what he considers a good motive. However, the common sense of any school boy or girl tells him or her that these acts do not grow out of strong moral character. So a person to have strong moral character must be *a good thinker, a lover of truth, beauty, and righteousness, with a well trained will to the end of acting truthfully, beautifully, and righteously.*

Importance of the right view.—Purpose is beginning and end in every kind of process. Purpose as an idea is the beginning, and it moves forward guiding the process to its realization, the end. Thus purpose determines the end reached, and, also, the

character of the process in reaching the end together with the means used in carrying on the process.

Illustration.—A man wishes to beautify his lawn, the purpose, which exists only as an idea. But it is the beginning in the process. He sets out shrubbery, makes flower beds and plants flowers, orderly arranged, places walks, and constructs a fountain in some suitable place. All this constitutes the process, which the purpose guides. In the light of the purpose the work must be neatly, orderly and artistically done, or the beauty will be marred. So the purpose also determines the kind of shrubbery, flowers, walks and fountain selected, that is, the means. All this work well done, the lawn is beautiful, which is the realization of purpose. So the purpose was beginning as idea, and end as its realization.

From the foregoing the importance of having the right purpose of education before each student and teacher begins to appear. It will determine:

1. The character of the educational process.
2. The means used in the process of education.
3. The thing accomplished by the educational process.

Of all the questions educational that enlist the intellect and appeal to the interests of the people, no other is so important as this: no other is so vital and determining in its effects; no other is so far-reaching in its influence. Upon the appreciation of its importance, its correct solution, the faith in it, and the force

of it in the form of living principles in the lives of students and teachers depend not only the success of individuals, but even the perpetuity of national life.

In general it may be said that man aims at two things in life:

1. "Animal happiness."
2. "Spiritual worthiness."

Animal happiness means a condition in life in which the individual is freed from physical bondage. It means the possession of the material blessings of life to the extent that one may have food, clothing, and shelter for himself and his family. It is somewhat relative, meaning different things to different persons. But in all cases it refers to the possession of money, or property to the end of bodily comfort. It is the practical set over against culture; the physical set over against the spiritual.

Spiritual worthiness means all that has been discussed under moral character.

These aims are both worthy ones, but it makes a mighty difference in the life of the individual which one holds the dominant place in his consciousness and affections. It will change the whole current of his life and character.

What the Primary Aim of Education Is Not.—The predominant aim of education is not animal happiness. If it were, man would be no better than the lower animals in so far as the aim of his life is concerned. There is, however, a strong and wide-spread

belief that the purpose of education is primarily to furnish a means for obtaining a livelihood. Evidence of this is found in the ideas of students who first enter the work in the pedagogical department of our Normal schools. It is probably not an exaggeration to say that nine-tenths of the students entering the Normal schools of the country hold in mind as the predominant end the money-making purpose. Further evidence of this is found in the ideas that parents generally have in sending their children to school. It is common for parents to say in reply to the question, "Why are you sending your children to school?" something in substance like this: "I want my child to be educated that he may not have so hard a time in life as I have had."

What the Primary Aim of Education Is.—The primary aim of education is "spiritual worthiness." In our civilization there is a felt-need for strong moral character above all other things. Can there be any doubt of a strong felt-need for manhood and womanhood among the masses of our people, when ignorance, vice, and corruption go hand in hand with poverty, degradation, and human misery; when there is scarcely a court in the land in which one can feel perfectly assured of justice; when no attempt is made to conceal the fact that to corrupt the right of suffrage is regarded as fair play; when so many men in the common affairs of life will not deal honestly with each other? Is there any doubt of it, as long as our

legislators are susceptible to the influence of lobbyists and bribery; as long as men have not the manhood and moral courage to crush out of existence, when it lies within their power, a curse that fills our jails, penitentiaries, and almshouses, and sends eighty thousand of citizens in our country yearly to premature graves; that causes the loss of fortunes, makes homes desolate, and perpetuates its evil? One can assert without fear of successful contradiction that the most pressing need of the nation, the race and humanity is a better moral type of manhood and womanhood. Never was J. G. Holland's "Prayer of the Nation" more true than now. He says:

"God give us men! A time like this demands
Strong minds, great hearts, true faith and ready hands,
Men whom the lust of office does not kill;
Men whom the spoils of office can not buy,
Men who possess opinions and a will;
Men who have honor and will not lie;
Men who can stand before a demagogue
And scorn his treacherous flattery without winking,
Tall men, sun-crowned, who live above the fog
In public duty and private thinking."

Education is living rather than mere preparation for living, and human life will of necessity in the process of developing conform with the unfolding of life wherever found. Then when we have found out the universal law of the unfolding life process, we have found the real purpose of the educational process. This is always an upward striving to accomplish the end prompted by inherent self-urgency. Thus the

acorn develops into the typical oak tree, true to the best implanted in it. The grain of corn grows to the mature stalk and ear, also true to its best nature. The poet idealizes it thus,

“Every clod feels a stir of might,
An instinct within it that reaches and towers,
And groping blindly above it for light,
Climbs to a soul in grass and flowers.”

The animal world feels the same self-urgency, content in the ‘faith of accomplishing the whereunto it was sent.’ The larva develops into the beautiful butterfly true to this principle. Within the egg is, in potentia, the songster of woodland and fields, and its life consists in making the potential that to which its self-urgency points. The poet understands this when he says,

“To-day I saw a dragon-fly
Come from the wells where he did lie.
An inner impulse rent the vail
Of his old husk: from head to tail
Came out clear plates of sapphire mail.”

The human being comes into this world the most in bondage of all animals. His unpreparedness for living is the greatest. He is least capable of taking care of himself. But who can tell what he is capable of becoming? It is confidently believed that, while he is actually in bondage in every way, he is potentially absolutely free. Education is the growth from what the individual is to what freedom is in him potentially, and to which his self-urgency impels him. Then the purpose of education is strong thinking

powers, well developed emotional faculties, and a well trained and strong will, to the end of scrupulous honesty and integrity, of strong moral character, and of whatever else makes the even current of life run full and strong.

The poet Holmes voices the idealized purpose in education in,

“ Build thee more stately mansions, O my soul,
As the swift seasons roll!
Leave thy low-vaulted past!
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast,
Till thou at length art free,
Leaving thine outgrown shell by life's unresting sea.”

By way of emphasis it may be said that education comprehends intellectual shrewdness, but not without the power of right direction. The educated man is scrupulously honest and upright in every way. He is the one who sees the Universal Spirit back of all things, of which nature, life and thought are the manifestations. He knows his highest destiny is reached by putting himself in harmony with the laws of life, and living the universal life of the spirit. He sees his life as a complexity of physical, intellectual, æsthetic, social, moral and religious aspects, and knows the purpose of education is the harmonious development of these capacities.

It was noticed in Chapter I. that the necessary elements of the school are the pupil, the teacher, and the curriculum. Having studied the nature of the

school and the work it has to do, it remains for us to study the necessary elements of the school, and the school organization. The first and most important of the necessary elements is the child. And the child presents himself to us as both a physical being and a spiritual being. It is with the physical nature of the child that the next chapter will deal.

CHAPTER III.

THE PHYSICAL NATURE OF THE CHILD.

Importance of Its Study.—When one looks around him and sees how few men and women he can find in middle or later life who are thoroughly well, he begins to appreciate the need of a better understanding of the laws of life by teachers, parents, and all other persons. This knowledge of the laws of life is needed by every teacher that he may do something toward the physical education of the children under his control. The time has come when most teachers recognize the fact that physical education is a need in the school. If any one doubts the need of physical education, let him consider the natural pain, the weariness, the gloom, the waste of time and money entailed by bad health. Let him also consider how greatly ill-health hinders the discharge of all duties, makes business often impossible, and always more difficult; produces an irritability fatal to the right management of children; puts the function of citizenship out of the question, and makes amusement a bore. It seems pretty clear that physical sins, partly our forefathers' and partly our own, which produce this ill-health, deduct more from complete living than any-

thing else, and to a great extent make life a failure and a burden instead of a benefaction and a pleasure.'

"To all of which add the fact, that life, besides thus being immensely deteriorated, is also cut short. It is not true, as we commonly suppose, that a disorder or a disease from which we have recovered leaves us as before. No disturbance of the normal course of the functions can pass away and leave things exactly as they were. In all cases a permanent damage is done, not immediately appreciable, it may be, but still there; and along with other such items which Nature in her strict account-keeping never drops; will tell against us to the inevitable shortening of our days. Through the accumulation of small injuries it is that constitutions are commonly undermined, and break down long before their time. And if we call to mind how far the average duration of life falls below the possible duration, we see how immense is the loss. When to the numerous partial deductions which bad health entails, we add this great final deduction, it results that ordinarily more than one-half of life is thrown away."

The above taken largely from Herbert Spencer places well before us the need of better physical education. But an exhaustive discussion of the physical nature of the pupil is out of the question here however valuable the knowledge may be. But some points helpful to the student and teacher in school work may be discussed.

Food.—It is well known that there is a prevailing idea current that children should not be allowed to eat much animal food. It is thought by many persons that a vegetable diet is the one most suitable for children, and many good people join in with this belief without thinking very much whether it is true or not, or if true, why it is true. The thing for the parent and teacher to find out is what the truths of modern science show when applied to this question. Since we must make the discussion short here, we may say that the truths of modern science do not show that a vegetable diet is the best for children. On the other hand, it can be plainly shown by applying the light of scientific truth to this question that an exclusive vegetable diet is not the best for children or any other normal human being. This belief that a vegetable dietary is best for children “is a dogma repeated and received without proof.” The verdict of science is exactly opposite to the popular opinion on this question.

These two reasons are given in support of the vegetable dietary theory: 1. The health of the child is better promoted by a vegetable dietary. 2. The child whose dietary is vegetable has a better disposition than the one whose food is largely animal.

Let us notice each of these briefly. The maintenance of the health of the child demands food for three things: 1. To make up for the waste of the body. 2. To supply fuel to keep up the temperature

of the body. 3. To furnish material for building up new tissue—for growth. Now, since sufficient nutriment must be furnished to meet these three demands, if health be subserved, the question is, shall they be met by furnishing a large quantity of weak food, or by furnishing a moderate quantity of rich food? The health demands further an economy of digestion, and science again helps us by showing that health is not preserved by imposing upon digestion large quantities of dilute food. Again it is well known that those persons or animals that live on vegetable diet have large abdomens, flabby muscles, and too little energy.

With respect to the second reason urged, it may be said that it has never been scientifically proved that an animal diet gives children bad dispositions. The verdict of science is again against this. The Esquimaux and the Laplander are both easy-going sort of fellows that can scarcely be provoked into a fight, yet they and their ancestors for ages have lived almost wholly on meat. It is well known that good feeding gives animals good dispositions. The opinion that animal food makes children irritable, and hard to get along with, lacks convincing proof. "That nation proverbially known as 'beef-eaters' has produced the greatest literature of all time."

It can not be too strongly impressed upon parents and teachers that children's education demands from all points of view plenty of wholesome,

nutritious food. Children have often been punished for restlessness caused by a hunger that would not let them be still, and for which the only remedy was a good, wholesome meal.

Clothing.—There are some ideas in regard to clothing more or less generally held that are equally untrue with those held concerning food, and which are the source of much evil, and human misery. The child needs clothing to protect him from cold, heat, and contact with substances that might injure him. This is the primary purpose of clothing, and to this end all considerations should look. “The common notion about ‘hardening’ children is a grievous delusion. Children are not unfrequently ‘hardened’ out of the world; and those who survive, permanently suffer either in growth or constitution.” This is true because a permanent quantity of heat is necessary to the health and growth of the body. Now if this quantity of heat is lessened for any considerable time because of a lack of clothing or because of exposure, the health will be impaired, and retarded or stunted growth will result. If the constitution is not strong enough to bear the loss of heat, the result will be disease, sickness, and premature death. However, if the constitution be strong enough to bear the loss of heat due to scanty clothing, no further injury may result than stunted growth.

“This truth is displayed alike in animals and man. The Shetland pony bears greater inclemencies

than the horses of the south, but is dwarfed. Highland sheep and cattle, living in a colder climate, are stunted in comparison with English breeds. In both the arctic and antarctic regions the human race falls much below its ordinary height: the Laplander and Esquimaux are very short; and the Terra del Fuegians, who go naked in a cold latitude, are described by Darwin as so stunted and hideous, that one can hardly make one's self believe they are fellow-creatures."

Leibeg says: "Our clothing is, in reference to the temperature of the body, merely an equivalent for a certain amount of food." The only safe rule is as follows: children must wear clothes sufficient in quantity and quality to protect the body from an abiding sensation of cold, however slight.

Again, children are compelled to wear clothing which makes them uncomfortable in the extreme in order to conform to fashion. "Discomfort more or less great, is inflicted; frequent disorders are entailed; growth is checked or stamina undermined; premature death not uncommonly caused; and all because it is thought needful to make frocks" which are fashionable. It can not be too strongly emphasized that while clothing should not be in excess, it should always be sufficient in quantity and quality to prevent any abiding feeling of cold. It should be made of some good non-conductive material, and strong enough to stand the wear and tear of childish

sports with little damage, and its color should be well adapted to use and exposure.

But what is the pedagogical bearing of food and clothing. Two thoughts here suggest themselves. 1. Excellent opportunities often present themselves to the teacher of bringing this fact, that the child's education demands plenty of wholesome, nutritious food, and plenty of clothing of the right quality, before parents and people at large. There is opportunity here for a great improvement in conditions which affect the education of the children, and it is the duty of each teacher to do all he can to improve these conditions. The teacher must understand and be impressed with the importance of these questions to do effectively his part toward bringing about better conditions. 2. The teacher who understands the relation of food and clothing to education will not expect the same quality or quantity of work from the poorly fed and poorly clothed child that he will expect from his more fortunate companions. Not all children can be treated alike in teaching. The teaching must conform to the needs of the child. The needs for no two children are the same. The knowledge of the relation of the food and clothing question to education will give the teacher more charity, and a more sympathetic insight in teaching those children who are poorly fed and clothed. And this question of charity and sympathetic insight is of tremendous importance to the children.

School-room Conditions.—There are several points concerning the condition of the school-room that are properly to be discussed in pedagogy work; and because of their relation to the child's physical being, it, from one view-point, is proper to discuss them here. These points are: 1. Ventilation. 2. Temperature. 3. Lighting. 4. Seating. 5. Cleanliness.

Ventilation.—The general well-being of the physical nature depends upon the quantity and quality of the blood. If the blood be not properly aerated, the whole organism suffers at once from the effect of the blood upon it. There is fatigue, drowsiness, stupor, headache, and a general lack of interest and vivacity. These conditions continued will lead to bad colds, catarrh, pneumonia, tuberculosis and death. From the point of the physical welfare of the child, the question of ventilation is of the highest importance. It is not an uncommon thing to find seventy-five per cent. of the students of a school room suffering with colds at the same time, the teacher often-times attributing this condition of things to circumstances over which he has no control, when probably he is to blame for it largely in neglecting proper ventilation. The child's success in life will depend to such a large extent upon his physical excellence that it becomes of tremendous importance to the teacher to do his part in giving him a sound body.

It is not the purpose to discuss the technique of ventilation in this place. There are two things which

must be efficiently provided for, however. First, plenty of pure, fresh air must be admitted to the school-room at all times. Secondly, it must be admitted to the school-room in such a way that the children and teacher may not at any time be exposed to currents and draughts. Currents and draughts are the source of colds, sore throat, earache, neuralgia and catarrh. The two following points should be emphasized, too: 1. Air may be cold and at the same time be impure and unfit to breathe. This is a truth that janitors in a great many instances seem entirely incapable of getting into their heads. Who has not had the exasperating experience of sitting at church or at some other public gathering suffering intensely from cold and bad air at the same time. 2. It is every teacher's highest duty to acquaint himself with the technique of ventilation to the end that he may ventilate properly both his school-room and his living rooms.

Temperature.—No school-room is conducive to health, which is either too warm or too cold. If too cold it will bring on a sensation of chilliness that is not only extremely uncomfortable but dangerous to the health. All the evils that result from clothing deficient in quantity and quality may likewise be brought on by sitting, working and living in an atmosphere of too low temperature. Colds, sore throat, neuralgia, earache, catarrh, pneumonia, tuberculosis, stunted constitution and arrested physical

growth and even death may easily be traced to this source in many cases. It is almost as bad if the school-room is constantly kept too warm. To say nothing of diseases brought on by leaving a room too warm and going out into the open air, the question ought to be of interest to the teacher because of the enervating effect a too high temperature has upon one's life. There is nothing that more quickly takes the energy, vivacity, and vitality out of students than habitually keeping a school-room too warm.

A temperature of 70° Fahrenheit is, all things considered, the temperature that should as nearly as possible be maintained in the school-room. Any variation from this of more than two degrees is to be avoided as detrimental. Every school-room should be provided with a thermometer, if not by the school board, by the teacher, to the end that approximately the proper temperature may be maintained.

It is worthy of note in this connection that temperament, clothing, and food of children have a direct bearing upon the question of temperature that no really earnest, sympathetic teacher will ignore. Some children are comfortable in an atmosphere at 68°, some at 70°, and others at 72°. Some are clothed too warmly, some about right, and some too scantily clothed. Again some have an abundance of food of good quality, while others have food deficient both in quantity and quality. No teacher can afford to ignore these various conditions, and no sympathetic, loving teacher will want to do so.

Lighting. — The facilities for lighting school houses are of such a character often-times that the eyes of the students are permanently injured. Light insufficient in quantity is often-times admitted to the room; and again when the quantity admitted is sufficient, it comes into the room in such a way that it hurts the eyes. In fact very few school houses conform in their facilities for lighting, to what truths modern science teaches on this subject. These defects in facilities for lighting are so universal that some diseases of the eye caused thereby, have come to be known as school diseases. Myopia (short-sightedness) and Asthenopia (weakness of the eyes) are the most common of these. It is true that our school houses and schools have been and are now veritable establishments for producing myopia. Large numbers of school children have been examined in Germany, France, Sweeden, Russia and America for the purpose of getting helpful information on the subject of myopia. Dr. Hermann Cohn examined the eyes of 10,060 school children and found myopia gradually increasing from 1.4 per cent. in the village schools to 26.2 in the gymnasia. Those children who had been in the village schools six months or less showed no myopia. Dr. Motais examined in France the eyes of 6,680 students with similar results; he found in some of the colleges that the percentage of myopic students was as high as 80. Dr. Dowling examined the eyes of 1,000 school children

in Cincinnati and found that a little more than 30 per cent. of them were near-sighted. All the cases examined showed a gradual increase of myopia from the first grade.

Myopia is to be avoided because it is disagreeable, painful and inconvenient; because it is unnatural and places the one afflicted at a disadvantage in life in the struggle for success and happiness.

School-rooms should never be more than 33 ft. in length and 24 ft. in width. There should be an abundance of windows so arranged as to admit the light from the left and rear of the student. Blackboards should be at the front and at the right.

Dr. A. G. Young, secretary of the State Board of Health in Maine, gives the following rules for the prevention of myopia in school:

1. The school-room should have an abundance of light in every part. The principal source of light should be at the pupil's left.

2. The periods of eye work should not be too long.

3. A large part of the instruction should be communicated orally during school hours, and the eye-straining and time-robbing preparation of written lessons should be reduced to the lowest possible point.

4. The school work to be done at home should be limited to a very small amount, and in the younger classes to none.

5. The desks and seats should be of the proper pattern and size, otherwise stooping or other postures

favoring congestion of the eye and production of myopia will be assumed by the pupil.

6. The demand for written work should be moderate.

7. The type of all school and other books for children should be large and distinct.

8. Black-boards should be of a dead black, not glossy. They should be placed where they will be well lighted.

If these regulations be well observed, other school diseases of the eye, as well as myopia, will be, in all probability, reduced to the minimum.

Seating.—Since this subject will be touched upon in the chapter on “Organization,” the treatment here will be brief. Suffice it to say that it is of the highest importance that seats and desks should be of proper size and pattern to the end that all conditions conducive to spinal curvatures, round shoulders, and lateral curvatures, strained eyes, and other physical deformities may be removed; also, to the end that all conditions tending to make the child physically uncomfortable may be removed.

Cleanliness.—It is certainly as true as it is old that “cleanliness is next to godliness.” Every school house should be kept scrupulously neat and clean. No paper, bread crumbs, chalk, nut-shells, etc., should be allowed upon the floor. The abominable habit that students and even teachers have of expectorating upon the school house floor is not under any

circumstances to be tolerated. It should be held as a criminal offense. "The reason for this care is that dust and dirt in a school-room is a serious sanitary evil. Dust of itself is an irritant to the eyes and the air passages. Dust is known to be a bearer of disease germs. Tuberculosis is certainly transmitted thus, and it is very probable that many other infectious diseases are spread in the same way. An infectious inflammation of the eyes is sometimes very prevalent in schools, and it is believed that the germs of this disease are spread by means of the dust in school-rooms as well as in other ways." This dust evil could be reduced if all school houses had hard wood floors and were kept well oiled; if they were well swept daily at the close of the afternoon session after all the students had left them. The windows should be thrown wide open, and the floor sprinkled with damp sawdust before sweeping. The teacher who is thoroughly in earnest with respect to the question of cleanliness will not be afraid to take the broom and duster and set things to rights even though the janitor does slight his work somewhat. As a rule one can tell a great deal about the quality of a teacher by the cleanliness of his school-room.

The Sense Organs.—The senses are those functions of the soul which are concerned in giving us the most elementary knowledge and feeling appropriate to objects in the external world. The sense organs are those organs whose function is to bring stimulus

in such a relation to our nervous systems that the mind will respond with a corresponding activity. The senses are divided into: 1. General, or organic. 2. Special. Of the special senses the best authorities now recognize seven, as follows: 1. Taste. 2. Smell. 3. Touch. 4. Temperature sense. 5. Muscular sense. 6. Hearing. 7. Sight. The general, or organic sense, is the sense that gives us a knowledge of the general well-being or ill-being of the body and has no particular sense organ. Hunger, thirst and fatigue are sensations obtained through the general sense. The special senses are those senses that give us a knowledge mainly of objects around us and have special sense organs.

The sense organs are of the highest importance in that through them the child first awakens to conscious life. Without the sense organs the mind would never grow. It could remain nothing more than a bundle of capacities. Without the sense organs all intellectual growth as well as all pleasure of living would be denied one.

Since the sense organs are of the highest importance in education, their health and growth become from a pedagogical view-point one of the most practical questions with which the teacher has to deal. All the special sense organs as well as the general sense organs are subject to pathologic conditions that may demand constant attention, but in this short chapter on the "Physical Being" only two can be

dealt with to any extent. These are: 1. The sense organ of hearing. 2. The sense organ of sight.

Hearing.—Diseases of the ear are always liable to produce partial or entire deafness. Too few people realize what a sad misfortune partial or entire deafness is, and how many people are more or less deaf. “Authorities estimate that from fifty to sixty per cent. of the children are more or less defective in hearing. It is also claimed that by judicious treatment the percentage can be reduced to fifteen or twenty.” “There are too many partially deaf people in every community. Every such one is badly handicapped in his business and social relations. How many men lose good positions because of defective hearing! How many sad and fatal accidents are due to the same cause! The new education can do no better service to the oncoming generations than to preserve and perfect this sense in the children.

The clear understanding of language is dependent upon the ability to hear well. Often the deepest meaning and the finest shades of thought are lost because an accent, a subvocal, or a little slur of the voice escapes notice. A child is thought dull or stupid who could not be otherwise, for he seldom hears anything that is said at home or in the school-room. I visited a class room not long since, and found that pupils in the rear were craning their necks to see the diagrams on the board and hear the explanations given. Some soon gave up in despair and

settled down in a listless way to await the end of the recitation. Inquiry developed the fact that nearly one-third of them heard little of any recitation. Under such circumstances what could be expected of them?"

Every teacher should test the hearing of his students and seat them accordingly. The following is an easy method of testing: "The pupil is placed at one end of the school-room with his back turned toward the teacher, who dictates in a clear, but not loud voice, while the scholar writes. The teacher should begin by standing at the farther end of the room. If, at that distance, the pupil has any difficulty in hearing, the teacher gradually approaches until the pupil understands perfectly, which will be shown by his writing the dictated matter correctly and without hesitation. According to the distance at which the scholar hears readily, he is ranked and placed in the school-room. If, for instance, he hears at a distance of fifteen feet only, he is placed within that distance from the teacher's desk."

Seeing.—Myopia has already been discussed as a school disease. Few persons, teachers included, are aware of the number of cases of headache, and nervousness caused by myopic eyes. "There seems to be no remedy for these defects save in glasses properly fitted. It is quite common and is a prolific source of headache. Thousands of cases of chronic headache have been promptly cured by the use of

glasses." "A ministerial friend tells me that a teacher forced his son, who was afflicted with myopia, to hold his book at the regulation distance, and in the regulation position as he read or studied, and that the headache resulting threw him into such nervous disorders that at least once a fortnight he was obliged to keep him out of school for three or four days. A lady friend tells me that her little daughter had been coming home every day for months with a bad headache, and that she was losing all interest in school, when the writer visited the city and urged the teachers to test the sight and hearing of their pupils. This girl was found defective in eyesight and given a front seat. In two weeks her headache was all gone, and her interest in school had returned." A multitude of similar cases might be given but these must suffice.

It is the duty of every teacher to test the eyesight of his children. Every teacher can procure a set of Snellin's cards of almost any jeweler or optician for ten cents, and can learn to use them correctly in tests in five minutes. They are among the best means for definite tests. Having found the defectives, the teacher's duty is to inform the parents or guardians and do what may be done by seating the students so far as possible so as to favor the defective ones. Any one who is not willing to take this much trouble for his students is not fit to be in the school-room and is not worthy the name of teacher.

CHAPTER IV.

THE SPIRITUAL NATURE OF THE CHILD.

An Attribute.—When we attempt to study any thing that we may know it, our study always consists in seeking out the attributes of that thing, and when we know any object well, we see its attributes. All learning consists in grasping with the mind the attributes of things. If one sees all the attributes of any object, he knows all there is to know about that object. So to know all the attributes there are in the universe to know means absolute freedom of one's knowing power, his intellect. But this discussion on attributes does not mean as much as it should, unless we have a definite idea of an attribute. A very good statement for an attribute is as follows: *An attribute is a characteristic of any object by which we know it.*

Illustration.—If one knows a table well, he knows its use, form, color, material, length, height, width, weight and decorations; also, the form, length, width, height, use, color, material, make, condition, and decoration of the parts; also, how the parts are connected with the table as a whole and with one another. But all these are attributes of the table. So to know the table is to know its attributes. The table pos-

sesses other attributes than those mentioned, but these are sufficient for illustration.

The first step in studying the spiritual nature of the child is a study of the attributes of the mind. Some might think we would study the substance the mind is made of, but this we can not do. There is absolutely no way to study what the mind is made of, but we can study its attributes. We will study the following important mental attributes:

1. Consciousness.
2. Attention.
3. Apperception.
4. Self-activity.
5. Iterativeness.
6. Rhythm.

Consciousness.—If you are asked a question, you either know the answer to it or you do not, and you, further, know that you know the answer or do not know it. That is to say, you know the condition of your own mind. It is because of the attribute of consciousness that the mind is able to do this. Thus through consciousness the mind is both the knower and the thing known. If without provocation one should strike you in the face, you know, without any difficulty, your state of mind toward that person. If the question, "How do you know your own mental states?" were asked you, you could only answer by saying, "I know them through consciousness." One can get some idea of consciousness, if he will compare

his state of mind when he is asleep with his state of mind when he is wide awake. In the one he is more or less unconscious, in the other consciousness is in charge of the mind. Consciousness is usually considered indefinable. The following, though, approaches a definition: *Consciousness is that attribute of mind by which it knows its own states and activities.* Consciousness is the most important and most fundamental attribute of mind. Without it, mind, as we know it, could not exist.

Attention.—The mind is constantly having experiences. Mental life, as well as physical, is a succession of experiences. The term mental experience simply means *a mental change of any kind*. So mental life is a series of mental changes. Most of our mental experiences are carried on without our being fully conscious of them, but the mind has the power of bringing any experience into consciousness fully and focusing its energy upon it. It is able to do this through the attribute of attention. It appears from the above that attending can be analyzed into two activities, as follows:

1. The activity of bringing an experience fully into consciousness.
2. The focusing of the mind's energy upon it. Sometimes we think that the mind's energy is focused upon some object outside of the mind, but a careful study will show us that the energy of the mind is focused upon a mental experience.

The following is a good definition for attention: *Attention is that attribute of mind by which it brings fully into consciousness some experience and focuses its energy upon it.*

Illustration.—One is sitting in his room studying his lesson in arithmetic. The clock is sitting on the mantel shelf ticking away as loudly as usual, but he does not hear it clearly, though he has a sort of diffused consciousness of its ticking. Suppose some one says “How loudly the clock ticks!” Immediately he hears it plainly. That is to say, the mind brings fully into consciousness the experience appropriate to the ticking of the clock and focuses its energy upon it. The focusing element in attention is analogous to the action of a lens in focusing the rays of the sun.

Apperception.—All knowing is the mind’s process in getting meaning. But this statement does not mean much unless we see what meaning is, and what has the meaning. It seems at first thought that objects in the outside world possess the meaning, but a careful analysis shows that meaning is in the mind, and *is the relation between mental experiences.* The mind in all knowing gets meaning from the experience appropriate to the thing known just to the degree in which it can connect its past experiences with its present experience and grasp the relation between them. Apperception is this process of connecting the past experiences with the present ex-

perience in knowing, feeling, and willing. But this is not all of apperception. Every experience the mind has leaves its effect upon the mind. The mind never is again after an experience what it was before. Psychologists say experiences are organized into the mind. It is clearer to say experiences leave their effects upon the mind. Now we are in a position to understand the following definition for apperception: *Apperception is an attribute of mind by which it brings its past experiences to bear upon the present experience in interpreting it, and organizes the present experience into itself.*

Illustration.—If one who knows nothing of geology were walking down a valley and should find a rock almost round, but having a plane surface as if it were worn off by holding it on a grindstone, he would probably get just the same meaning from it as he would by looking at any other rock. But if a geologist should find it, he would connect his past experiences with it and say it called to his mind an ice age when tremendous ice fields covered all this country. The difference between the two men was in the experiences they brought to bear upon the present experience.

Self-activity.—This is one of the very hardest attributes of mind to understand, but we can get some idea of self-activity by contrasting objects that possess it with those that do not. A sewing machine acts in sewing, but always from a cause without

itself. In a similar manner any sort of machine acts. A plant acts in growing by taking its food from the soil and air and making it into itself; and a horse acts by taking food and changing it into horse flesh; and, also, by moving from place to place, he acts. The action of the plant and the horse originate from within while the action of the machine is caused from without. The horse and the plant possess self-activity and the machine does not. The mind possesses this ability to originate its own activities, and is thus said to be self-active. The following is probably as good definition as can be given for self-activity: *Self-activity is that attribute of mind by which the mind causes itself to act.*

It is helpful to know that the mind possesses the ability to cause its own activities; but it is more helpful to the teacher to know that the mind grows by its own activity, and *grows most when exercised to the maximum healthful activity.* This attribute of self-activity is perhaps more frequently violated in teaching than any other law of the mind.

Iterativeness.—When the muscles of the arm and fingers perform the movements in making any character in writing for the first time, the activity is done with difficulty and very unskilfully, but the next attempt is made with more ease and success. Each repeated act makes the performance more easily and skilfully accomplished. Now what was it that remained with the muscles after each activity that

caused them to perform the act again with more ease? This we can only answer by saying it is a tendency left in the muscles. By tendency is meant a disposition to perform some activity. Thus we say the plumule of a plant has a tendency to grow upward, and the radix has a tendency to grow downward. We fold a piece of paper, and then say it has a tendency to fold in the same place again, and this is what is meant by the attribute of iterativeness. The following is the formal definition for it: *Iterativeness is that attribute of mind by which it tends to act again as it has acted.*

Rhythm.—When the word, rhythm, is spoken, the average person probably thinks of poetry and music. But rhythm is an attribute that belongs to almost everything in the world. Every leaf, flower, and blade of grass possesses rhythm. Rhythm in its broadest sense is *a thing, the departure from that thing, and a return to it.* The following is rhythmical:

“The day is cold and dark and dreary;
It rains and the wind is never weary.”

In this there is the sound symbolized by *ear*y in the word, dreary. This is the thing, and “It rains, and the wind is never w” is the departure from it. The return to the thing is *ear*y in the word, weary. In the maple leaf rhythm is manifested by a portion on the right half always having a corresponding like portion on the left half, the parts between the like parts being different. One of the like parts is the

thing, that between them is the departure from it, and the other like part is the return to it. The world is full of rhythm and the human mind longs for it. Rhythm as an attribute of the mind may be defined as follows: *Rhythm is that attribute of mind by which the mind acts an activity, departs from it, and tends to return to it at regular recurring periods.*

Activities of the mind.—If we will examine our mental activities by looking within our minds, we will see that we are sometimes almost wholly occupied in thinking, again we are quivering with anger, and other times we are almost wholly occupied in directing our muscular or mental activities in doing some work. These distinctions among the three kinds of activities give basis for the classification of mental activities into:

1. Knowing.
2. Feeling.
3. Willing.

Thus knowing, feeling and willing are the three large classes into which all mental activities are divided. And now we are ready to study them.

Knowing.—In general all knowing is the mind's process in getting meaning. But this statement does not give much help unless the term, meaning, is well understood. Most persons, at first thought, would probably say that meaning is something that belongs to objects in the external world. But a little careful thinking reveals the fact that things very unlike what

the mind has ever known have very little meaning for the mind. And this thought carried out shows us that, if it were possible to find anything entirely different from anything the mind has ever known, it would have absolutely no meaning for the mind. Again, two persons look at the word, *obliviscor*, and while one gets no meaning from it, to the other it means *I forget*. So scarcely any two persons get the same meaning from an object or event they see. An object or event stimulates to a mental activity and, if the mind has past mental activities of a similar character to connect the present activity with, it is said the mind gets meaning. From this it may, in truth, be seen that the meaning is a thing which is in the mind. That is to say, meaning is relation, and further, it is the relation between the present mental experiences and past mental experiences. But even here we find two terms whose meaning must be understood. The first, *experience*, explained in a former chapter, is any mental change or any mental activity. The second, *relation*, is the likeness between mental experiences. The term, *relation*, means here what it means wherever used; namely, the connection the mind makes between things because of their likeness.

We are now in a position to give the following definition for knowing: *Knowing is the mind's process in grasping the relation between its present and its past experiences.*

Knowing Discriminating and Unifying. — Every act of knowing is an act of both discriminating and unifying. Discriminating is seeing differences, and unifying is seeing likenesses. So to say that knowing is both unifying and discriminating is to say the mind in knowing sees likenesses and differences between objects, or better, between mental experiences. One thing necessary to know a maple tree is to see the differences between it and a gooseberry bush, and another thing necessary is to see the likeness between it and the maple trees seen in the past.

All Knowing Indirect. — Psychologists say that all knowing is an indirect process. This means that the relation grasped in knowing an object is not the relation between the mind's present activity and the object, for that would be a direct process. In that case the meaning would come direct from the object to the mind. But this is just the thing that does not happen. The meaning comes by way of past experiences. So the past experience is the thing that comes in between the object and the experience appropriate to it and makes the knowing process indirect.

Feeling. — Every experience the mind has changes it permanently. It never is after an experience what it was before. Some of these experiences change the mind for the better and some change it for the worse, but all must change the mind permanently in some way. The fact that every experience changes

the mind permanently is called *the value of an experience* in psychology. If the experience is in harmony with the growth of the mind towards perfection, the experience is said to have a *positive* value. If the experience is not in harmony with the growth of the mind toward freedom, the experience is said to have a *negative* value. The mind has the ability to a greater or less extent of knowing the value of an experience to the self. That is to say, it knows, or at least thinks it knows, when it has an experience, whether the experience is in harmony or in conflict with its growth toward freedom. It is no doubt true that sometimes an experience is unfavorable to the growth toward perfection, even when the mind regards it as favorable. And it holds equally true that an experience may be favorable to the growth toward freedom, yet the mind regard it as unfavorable. When the mind has an experience, and becomes aware of the value of this experience to itself, the state of mind that arises is feeling: *Feeling is the state of mind which arises when the mind becomes aware of the value of an experience to the self.*

An analysis of the above definition reveals the following ideas in it:

1. State of mind.
2. Becoming aware.
3. Value of an experience.
4. An experience.
5. The self.

By state of mind is meant the internal side of its activities. It is the deeper condition of the mind. In the activity of a muscle, the whole muscle acts together, but the individual cells also act. The activities of the mind are analagous to the activity of the individual cells. Feeling is better called a state of mind.

Becoming aware of simply means becoming conscious of. *Value of an experience* means the effect of an experience on the self. *Experience* means any mental change or activity. *The self* in the broadest sense means the mind and the body both, but it is usually used in a narrower sense in psychology. It means the original capacity of the mind plus the effect of experiences on this capacity.

Love, Hate, and Indifference.—When the mind has an experience which it regards as having a positive value to the self, the feeling which arises is love. The definition is as follows: *Love is the feeling that arises when the mind has an experience which it regards as having a positive value to the self.*

If the mind regards the experience as having a negative value to the self, the feeling that arises is hate. The definition is as follows: *Hate is the feeling that arises when the mind has an experience which it regards as having a negative value to the self.*

If the mind regards the experience as having no value to the self, the feeling that arises is indifference. The definition is as follows: *Indifference is the feeling that arises when the mind has an experience which it re-*

gards as having neither a positive or negative value to the self.

Willing.—Willing is a complex process involving both knowing and feeling, but characterized by striving to act in some way. The process of willing always begins with an impulse. Impulse is an excess of energy, or it may be characterized as *felt pressure*. Impulses produce change. There are several kinds of impulses. The impulse that urges the bird to build its nest is a good illustration of a typical impulse. By a rather complex process *impulse* in the act of willing is changed into *desire*. Desire is a feeling directed towards something with the idea of possessing it. And, also, *desire* in the process of willing is changed into *choice*. Then, lastly, the mind directs the activities towards the realization of this choice. So the definition for willing is as follows: *Willing is the process in which the mind transforms impulse into desire, desire into choice, and in which the choice seeks to realize itself.* An analysis of this shows the following points:

1. Impulse.
2. Desire.
3. Choice.
4. The process by which impulse becomes desire.
5. The process by which desire becomes choice.
6. The process by which choice seeks to realize itself.

Impulse and desire have been discussed above. Choice will be explained after the discussion of "5" above. A careful analysis of the process in which impulse becomes desire will show that the following points are involved:

1. The mind sees its real condition.
2. The mind sees its ideal condition.
3. The mind compares these two.
4. The mind decides one is better or worse than the other.
5. A feeling of dissatisfaction arises. Then the desire arises.

Illustration.—A student has an impulse to go to a lecture—the real condition; he thinks of himself as being at the lecture—the ideal condition; he compares these two; he decides to be at the lecture would be a better condition than to be at home; then he is dissatisfied to be at home, and so desires to have himself at the lecture.

The process in which desire becomes choice involves what is known as the "conflict of desires." That is to say, there is always more than one desire from which the mind must select. In the illustration given the student probably desired to stay at home and study his lesson, but he also desired to go to the lecture. Since he could not both go to the lecture and stay at home, the two desires conflict. He selects one to the exclusion of the others, and this act

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of selecting is *the choice*. An analysis reveals the following:

1. Two or more desires.
2. The mind compares these.
3. The mind decides which is preferable.
4. The choosing of the preferable one, which is the choice.

The process by which choice seeks to realize itself consists simply of the directing of the activities to perform the deed. The directing is purely mental, but the activities directed may be either mental or physical. In the illustration the mind's directing the physical activity of going to the lecture was the process in which the choice was seeking to realize itself.

Any amount of study of willing in psychology could only consist in further developing the points here discussed. Who has these points well in mind has the plan of all treatments of willing.

In the succeeding chapter the so-called faculties of knowing will be discussed. They are Sense-perception, Memory, Imagination, Conception, Judgment and Reasoning.

CHAPTER V.

THE SPIRITUAL NATURE OF THE CHILD.

The Three Stages of Knowing.—One of the most helpful truths concerning the nature of mind is that there are three ascending stages of knowing which the mind may take with due study and meditation. These stages of knowing are called first, second and third. The first stage is, also, called the stage of the particular; the second is called the stage of the general; and the third is called the stage of the universal. *By a stage of knowing is meant a period in the mind's development in which it tends to emphasize a certain set of attributes in objects.* Thus in the first stage of knowing the mind tends to emphasize the particular attributes of objects; in the second stage it tends to emphasize the common, or general attributes; and in the third stage it tends to emphasize the universal attributes.

In the first stage of knowing the faculties of mind which are predominant are: 1. Sense-perception. 2. Memory. 3. Imagination. In the second stage of knowing the faculties that predominate are: 1. Conception. 2. Judgment. 3. Reasoning. 4. Systematization. In the third stage of knowing the faculty that predominates is,—Intuition, or insight.

The following diagram will reveal the classification:

Mental Activities	Knowing	1st Stage	{ Sense-perception, Memory, Imagination.
		2nd Stage	{ Conception, Judgment, Reasoning, Systematization.
	Feeling	3rd Stage	{ Intuition, or Insight.
	Willing		

Purpose of Classification. It must not be understood that there can be an act of knowing in which there is no other mental activity involved; nor can there be sense perception, judgment or reasoning in which no other mental activity is involved. The mind acts as a unit, and one complete mental activity involves every other. It can not be emphasized too strongly *that any complete mental activity has involved in it every other.* They are thought of as separate, just as one can think of the form and weight of a table as separate. This is done merely for the purpose of help in study. Thus there is knowing, feeling and willing in every mental activity.

Sense perception. We get knowledge of the external world through what are called the special senses. They are seven in number, as follows: 1. Touch. 2. Temperature sense. 3. Muscular sense. 4. Taste. 5. Smell. 6. Hearing. 7. Sight. Sense perception is this activity of the mind in getting a

knowledge of objects through the senses. But to get a clearer knowledge of sense-perception, we must understand the sensation. This we will now study.

The Sensation. In physiology we learn that there are nerve fibers which carry impulses to nerve centers, and also those which carry impulses away from nerve centers. Those which carry impulses to nerve centers are called *afferent* fibers; those which carry impulses away from nerve centers are called *efferent* fibers. When some motion comes in contact with the outer ending of an afferent nerve fiber, an impulse is set up there. This impulse is carried along the nerve fibre and to the brain setting up a change in the brain. Then there is a change in the mind corresponding to the change in the brain, and a state of consciousness arises from this change in the mind. This state of consciousness is the sensation. The sensation is in no part physical, but is a wholly mental thing. It is a state of consciousness. An analysis shows the following steps leading up to the sensation:

1. Stimulus or stimuli.
2. Change in outer nerve ending.
3. Transmission of impulse.
4. Change in brain.
5. Corresponding change in mind.

The sixth step is the sensation itself; that is, a state of consciousness. It is noticeable that four of these steps are physical, and the one just before the

actual sensation is mental. Just how the fourth, the physical, passes over into the fifth, the mental, no one knows. So far as human intelligence is concerned, it is a mystery. We know pretty well, however, that there is a mental change corresponding to the change in the brain. We are now in a position to give the following definition for sensation: *A sensation is a state of consciousness arising from a change in mind corresponding to a change in the brain caused by some external stimulus.*

Sensations are the material the mind works up into knowledge of external objects. They are analagous to the threads that are woven into cloth; the cloth is analagous to the knowledge, and the weaving process is analagous to sense-perception. Thus sense-perception is the process of getting meaning from the sensations. We are now able to give the following definition for it: *Sense-perception is the mental process of interpreting the combined sensations appropriate to some external object.* The product of the act of sense-perception is called a *percept*. A percept is an idea appropriate to a particular, material, external object present in time and space, and never present to the mind before.

Memory.—Every experience the mind has leaves a tendency for the mind to act as it acted in that experience. This tendency for the mind to act again as it has acted is called *retention* in psychology. Thus we learn a definition of a noun to-day, and to-morrow

are able to give it when called upon; we say we retained it. But where was it in the meantime? It only remained with the mind as a tendency. That is to say, the mind keeps the ability to act as it acted when the definition for the noun was learned. When the mind acts an experience it has before acted the process is usually called *reacting*. These two ideas, *retention* and *reacting*, enter into memory. But there must also be another idea. When the mind reacts an experience, if it is a process of remembering, it must be aware that the present experience is one it has had before. The process of seeing that the present experience is not a new one, but one the mind has had before is called identifying. The present experience is identified with the past experience. This act of identifying is the third idea in memory. We are now in a position to give the following definition for memory: *Memory is the mind's process in retaining, reacting, and identifying past mental experiences.* The identifying element in memory is the emphasized element. Without it, the act could not be called one of memory. It would only be an act of sense-perception.

The Law of Memory.—There is but one law of memory, and it is as follows: *If two or more things are held together in consciousness at the same time or in immediate succession, and one is afterward presented, it is the tendency for the others to come into consciousness.* This process of holding two or more things together

in consciousness at the same time or in immediate succession is just what is meant by association in psychology. It is to be noticed that in the law of memory things once thought only *tend* to come into consciousness again. They will surely be remembered if the association is strong enough. The strength of the association depends upon the following laws:

1. Those things which are held together in consciousness the most often are the most strongly associated.

2. Those things which are held together in consciousness with the highest degree of healthful mental energy are the most strongly associated.

3. Those things which are held together in consciousness the most free from entangling relations are the most strongly associated.

4. All associations grow weak with time unless reacted.

Imagination.—The mind has the ability of forming an idea, and then of putting this idea in a particular mental picture or image. If one tells you to shut your eyes and look at the following described apple with the mind's eye, the process, if you see it, is one of imagining: A large red apple, three inches in diameter, almost spherical, with a rotten spot as big as your thumb nail on one side, and a worm-hole on the other side just above the middle toward the stem end, is lying on a platter sitting on a stand in the center

of a room. Form the picture, and you are imagining. The pictures formed by the imagination may be almost like objects which have been seen or they may be highly idealized. In every case the imagination depends upon the memory for the material for its images. The Ancients imaged a huge dog with three immense heads, whose body bristled with snakes in the place of hairs, and whose barks resembled peals of thunder, as the guardian of Hades. There are no new elements here. They had seen dogs, heads, and snakes, and had heard peals of thunder. The only new thing is the new combination. What is true of this case is true of all. Imagination is dependent on sense-perception and memory. The following is a good definition for imagination: *Imagination is the mental process of embodying an idea in a particular form or image.*

Conception.—Sense-perception, memory, and imagination all deal with particular ideas. Conception, too, deals with an idea, but not a particular idea. It deals with what is called a general idea, or a general notion. But what is a general idea, or notion? If one should set out to examine triangles, he would find that every triangle is: 1. A figure. 2. Bounded by three lines. 3. Having just three angles. He would, also, find that each one has several attributes not found in all the others, and that each one has some attributes not found in any of the others. These last two kinds of attributes are necessary to the tri-

angles, but do not enter into the general idea of the triangle. The general idea, triangle, is made up of "1," "2" and "3." That is to say, it is made up of those attributes that could be found in any triangle. The definition for a general idea is: *A general idea, or notion, is an idea appropriate to those attributes possessed in common by each object of a class of objects.* The terms—*general idea, general notion, and concept*—all have the same meaning. This should be remembered. The process in which general ideas are formed is conception. The following is a good definition: *Conception is the process in which the mind forms an idea appropriate to the combined attributes possessed in common by each object of a class of objects.*

Method of Forming Concepts.—In actual life the method of forming concepts is as follows: First, a person sees an object of a class for the first time and gets a sort of concept containing many attributes not possessed by all the objects of the class; secondly, he sees other objects of the class and thus begins to drop from the concept the unnecessary attributes; this process of elimination is continued until just those attributes to be found in each object of the class remain.

Illustration.—The first man seen by a child may be one with white skin, black hair, and blue eyes. The concept of man for the child now contains the attributes, white skin, black hair, and blue eyes. Later on by seeing other men he drops off these

attributes one by one, since they do not belong to all men.

The Logical Steps.—The mind moves forward logically in conception in the following steps:

1. The mind acts an activity appropriate to some particular object by thinking several of its attributes.

2. The mind repeats this process with other similar objects.

3. The mind compares and contrasts these objects.

4. The mind selects and holds in consciousness the common attributes and drops from consciousness to some extent the uncommon attributes.

5. The mind generalizes in extending the common attributes of the particulars examined to all objects of the class.

6. The mind asserts the general idea.

7. The mind thinks the name of the general idea.

Judgment.—The mind gets particular ideas through sense-perception, and general ideas through conception. In judgment the mind grasps and emphasizes the relation between ideas. For example, the mind of man had the idea coal, and the idea fuel for ages before it ever grasped the relation between those ideas. When at last it did, it asserted that coal is a fuel. This process of grasping the relation between the idea, coal, and the idea, fuel, and asserting it was the mind's process of judging. Judgment may be defined as follows: *Judgment is the power by*

which the mind grasps the relation between ideas and asserts it.

Every judgment is expressed in a sentence, or proposition, if expressed at all. Thus the sentence is the symbol of the judgment. The sentence bears the relation to the judgment of the symbol to the thing symbolized. And the judgment bears the relation to the sentence of the thing symbolized to the symbol. Every judgment has three elements. They are called the *psychical subject*, the *psychical predicate*, and the *psychical copula*.

The act of judging is a triple activity of mind; that is, a one act made up of three. The following are the steps:

1. The mind grasps an object as an undifferentiated whole.
2. The mind isolates some attribute of this object.
3. The mind asserts the relation between the object and the isolated attribute.

Reasoning.—In judgment the mind emphasizes the relation between ideas. In reasoning it emphasizes the relation among judgments. In every act of reasoning there are three judgments involved, so related that the last is reached because of its relation to the other two. The formula of reasoning is this: A equals Z; B equals Z; therefore A equals B. The definition for reasoning is as follows: *Reasoning is the mental process of reaching a judgment because of its relation to two preceding judgments.*

The sentence was found to be the symbol of the judgment. In a like manner the symbol of reasoning is called the *sylllogism*. The following is a definition for the syllogism: *The syllogism is the formal expression of the act of reasoning, consisting of three propositions, the last of which is a conclusion from the other two.* The following is an example of the syllogism:

All animals possess voluntary motion;

This object is an animal;

Therefore, this object possesses voluntary motion.

The first two propositions in the syllogism are called the *premises*; one is the major premise, and the other is the minor premise.

The third proposition is called the *conclusion*.

The major premise is usually stated first, though not always. The three propositions of the syllogism may be arranged in different ways making what are known as the figures of the syllogism. There are three of these figures as follows:

First figure:

All animals possess voluntary motion;

This object is an animal;

This object possesses voluntary motion.

Second figure:

All animals possess voluntary motion;

This object possesses voluntary motion;

This object is an animal.

Third figure:

This object is an animal;

This object possesses voluntary motion;

Animals possess voluntary motion.

Classes of Reasoning.—There are as many classes of reasoning as there are figures of the syllogism. They are called *deduction*, *identification*, and *induction*. The first figure of the syllogism is the symbol of deduction; the second figure is the symbol of identification, and the third figure is the symbol of induction. In deduction the mind goes from a general truth to some particular truth; in identification the mind goes from a general truth to the classification of some particular object, and in induction the mind goes from some particular object to a general truth. All definitions should be worked out by inductive reasoning. All analysis and parsing in grammar employs identifying reasoning.

CHAPTER VI.

THE SCHOOL CURRICULUM.

Meaning of the Term.—The curriculum is the school course of study. It is made up of the various subjects studied in school. Thus in the primary, or common, schools the curriculum consists of reading, writing, spelling, arithmetic, grammar, language, history, geography, physiology, and in some places music and perhaps some other subjects. In the secondary, or high, schools it usually consists of algebra and geometry; Latin, composition, rhetoric, and literature; botany, zoology, chemistry, physics, geology, and astronomy; ancient history, mediæval history, and modern history; drawing and music. It is easily seen that the school curriculum is not a fixed thing, but that it changes from time to time. The subjects in the school curriculum taken as a whole divide themselves into groups. Thus there are the following groups: 1. The language group consisting of reading, writing, spelling, language, composition, rhetoric, grammar, literature, Latin, German, etc. 2. The mathematical group consisting of arithmetic, algebra, geometry, trigonometry, etc. 3. The natural science group consisting of physiology,

botany, zoology, psychology, chemistry, physics, astronomy, geology, etc. 4. The history group consisting of United States history, English history, etc. 5. The art group consisting of drawing and music, at the least.

Origin of the Curriculum.—It is the business of the school to educate the child. But the child must have something to study to the end that he may get knowledge and discipline. So, in general, it may be said that the school curriculum originated in part from a desire to furnish the pupil something to exercise his mind upon, to the end of health and growth. That is to say, the mind must have exercise to maintain its health, and it grows by its own activities. The felt-need for something to furnish a mental gymnastic is one of the things which gave rise to the school curriculum. This was the disciplinary idea from which the curriculum originated. This was not, in all probability, the foremost idea which brought forth the curriculum. The foremost idea was the need for useful knowledge. So it may be said that the second felt-need which had to do with originating the school curriculum was the felt-need for useful knowledge. By useful knowledge is meant knowledge which furnishes one guidance in right living. By guidance in living is meant guidance in: 1. Treating the body right. 2. Treating the mind right. 3. Managing one's business affairs right. 4. Bringing up a family right. 5. Behaving right as a

member of society. 6. Spending one's leisure time right.

The school curriculum at one time consisted of nothing more than reading, writing, spelling and arithmetic. There was a felt-need for some subject, the study of which would make the child skillful in (1) getting the thought and feeling from discourse; and (2) in communicating this thought and feeling in the author's own words. This felt-need was the origin of reading in the school curriculum. And the object of reading is to realize this need.

There was a felt-need for something that would make the children skillful in the art of making the written forms by which thought and feeling are communicated. This felt-need was the origin of the two subjects, writing and spelling, in the school curriculum. Writing emphasizes the form of the script letters as well as the connection of these letters into words; spelling emphasizes the form of the script word as a whole.

In carrying on transactions with one another people have to measure the things exchanged. So there was felt a need for some subject, the study of which would make the children skillful in measuring the things exchanged as well as skillful in measuring other things. So this felt-need brought arithmetic into the school curriculum, and was thus its origin. Likewise we could study out the origin of the other subjects in the primary school curriculum here, but

we can gain a helpful point by doing that under the head of:

The Growth of the Curriculum.—As stated above the school curriculum of the primary, or common, schools, at one time consisted barely of reading, writing, spelling, and arithmetic. But it has not remained so. Many new subjects have been added. That is to say, the school curriculum has grown. It is interesting and helpful to the teacher to trace out the ideas that brought the subjects into the school course as it grew, and to compare those ideas with what these subjects actually do for the pupils. That is, to see whether these subjects have realized in the lives of the children the things they were expected to realize.

It was seen that some subject needed to be added to the curriculum to teach the boys and girls the habit of using good language in communicating their thoughts and feelings. So grammar came in to supply this need, and for a long time it was expected that the study of grammar would actually give the pupils the habit of using good language in writing and speaking. Finally, it became evident that grammar was not doing this. The need for some subject to do this was still strongly felt. So the next attempt to introduce some subject to satisfy this want brought primary language as a subject into the curriculum. The question properly may be asked whether language lessons as usually taught will satisfy this want.

It was also felt that, since so much of life's success and happiness depends upon the health of the physical being, something ought to be in the curriculum, the study of which would give knowledge valuable for guidance in maintaining the health of the body. Thus the attempt to supply something to satisfy this want brought physiology and hygiene into the curriculum.

Man learns by experience and by example; that is, by his own experience and by the experience of others. He must depend upon the experience of the race for a large part of his knowledge. These experiences of the race have been preserved in the form of what is called recorded history; and these experiences thus recorded are the heritage left by the race to humanity. The child by studying these experiences sees that there are in human action a seed time, a season of growth, and a fruitage as truly as there are these in the world of vegetation. That is to say, he sees he must sow, if he would reap, and that he will inevitably reap as he sows. These thoughts having become firmly fixed in the life of the child, he ought more nearly to make his actions in all phases of life conform to the highest welfare of his being. The felt-need for the study of some subject which will fix these principles in the child's mind brought history into the primary school curriculum. Does history realize this end as usually taught?

Life of all kinds is very dependent. Plant life is

absolutely dependent upon light, heat and moisture; animal life is dependent upon plant life and other animal life; and each human being is dependent upon all these things along with his dependence upon his fellow men. This relation of the mutual dependence of life, vegetable, animal and human to one another, and to light, heat and moisture has led to the wide distribution of life over the earth's surface. Now, it was felt that some subject whose study would give the child a knowledge of the relief forms of the earth; light, heat, and moisture; plant life, animal life, and human life, in the relation of their mutual distribution on the earth's surface should be in the primary school curriculum. And this felt-need is the origin of geography as a subject in the primary schools.

Within the last few years there has been much agitation of the thought that the primary school curriculum should be enriched. In line with this thought literature, music, drawing, and nature work have been introduced into many elementary school curricula, and history and geography have come to be taught in the first, second, third, and fourth years of the child's school life. The main idea that has produced this growth in the curriculum is that the first work of the child in school had not been as well adapted to his stage of mental development as it should be, and that, therefore, was not of a character to arouse an enduring, drawing, permanent interest in school work in the child. So the felt-need for work

more interesting to the child than the formal work in reading, writing, spelling and number is largely the thing which has produced these changes in the curriculum.

A Rational Curriculum.—The curriculum in our schools has been criticised on the ground that it is not rational; that is, it is not reasonable. The question, What is a rational, or reasonable, school curriculum? at once suggests itself. And to the study of this point we are at once led.

All would agree, no doubt, that that curriculum best adapted to the needs of the learner's life is the most reasonable, and, therefore, the rational one. So, if in some way it can be decided what is best suited to the growing life of the child, the solution of this problem will be at hand. But in order to get at a systematic discussion of this problem, we must first decide what the educating process is to do for the learner: that is, we must decide the purpose of the educating process. And to this we turn for study.

The Purpose of the Educating Process.—It will be remembered that it has been stated that Mr. Herbert Spencer says that the purpose of education is "*to prepare for complete living.*" There is unanimity of opinion among thinking people everywhere on this point. Certainly any work in the educating process is to be regarded as good or bad according as it helps little or much in living. Thus when any one shows

how any subject helps in living, he is considered to have proven that the study of that subject is valuable. The French teacher, when he wishes to show the value of the study of French, always does it in terms of life; the German teacher and the teacher of Latin endeavor to show the use of German and Latin in living.

It will further be remembered that "Complete Living" means: 1. Treating the body right. 2. Treating the mind right. 3. Managing one's business affairs right. 4. Bringing up a family right. 5. Behaving right in our social relations; that is, as a member of the social institutions,—the state, the church, the school, and the family. 6. Spending our leisure time right.

The following discussion condensed largely from Herbert Spencer's "Education" is fertile in suggestion on the school curriculum: The only rational mode of judging of any school curriculum is, to judge in what degree it discharges the function of preparing for complete living. This must always be the test.

Manner of Applying the Test.—This test must be applied systematically and throughout all cases, if we are to reach any helpful results in our study. Not only must we cease from the mere unthinking adoption of the current fashion in education, but we must rise above the primitive, unsystematic style of judging of the value of subjects in the educational curricu-

lum. It is not sufficient to merely *think* that the pursuit of some subject gives information valuable in life, or that this kind of knowledge will be more useful than that. But some way must be sought out of actually estimating their respective values to the end that we may know as far as possible which are most deserving of attention.

Difficulty of the Task.—While this is a difficult task, it is of such momentous importance that its difficulty is no reason for pusillanimously neglecting to think about it. And, if we proceed by careful and systematic thinking, we may soon reach valuable results.

The First Step in Applying the Test.—The first step is to classify, in order of their importance, the lines of activity which make up human life. These are readily classified as follows: 1. Those activities put forth in direct self-preservation. 2. Those activities put forth in securing the necessities of life, in indirect self-preservation. 3. Those activities put forth in properly rearing a family. 4. Those activities put forth in maintaining our relations in the social institutions. 5. Those activities put forth in spending our leisure time.

The Order of Importance of These Lines.—A little consideration shows that these have been arranged in the order of their importance. If one were as ignorant as the infant of his environment, he would almost certainly lose his life in less than a day. And

as absolute ignorance of all other things would not bring death so quickly, it seems evident those activities spent in direct self-preservation and that knowledge which furnishes guidance for these activities are of foremost importance.

The activities spent in indirect self-preservation are next in importance. These are the activities put forth in securing food, clothing, and shelter. That these activities come before those put forth in rearing a family may be seen from the fact that self-maintenance makes possible those activities employed in rearing a family. Without self-maintenance there could be no family life. So those activities employed in indirect self-preservation are second to none but those needful in direct self-preservation.

No social life would be possible without the family. The family is the most fundamental social institution, and the rearing of children alone makes possible the state, church, etc. Those activities then employed in bringing up children are more important than those employed in maintaining the social relation in the institutions. Again the goodness of society as a whole depends upon the individuals which make it, and the quality of the individuals depends largely upon the family training. Therefore the welfare of the family underlies the welfare of society.

The next in importance are those activities put forth in fulfilling duties in society. This is true, be-

cause the various forms of pleasurable activities which fill up our leisure hours presuppose social institutions. No great degree of development of these pleasurable occupations is possible without well established social institutions.

The Rational Order of Education.—From the foregoing, the following is seen to be the rational order of education: 1. That education which prepares for direct self-preservation. 2. That education which prepares for indirect self-preservation. 3. That education which prepares for parenthood, and the bringing up of a family. 4. That education which prepares for fulfilling one's duty in the social institutions. 5. That education which prepares for spending right one's leisure time. While there may be particular exceptions and modifications of this order in the lives of individuals, yet there remains these broadly marked divisions, and they subordinate one another substantially as indicated.

The Second Step in Applying the Test.—Not all knowledge is of equal value to the human race. Some may have a vital bearing on all human life for all time; some may touch only the lives of a few for but a brief period of time; and some again may be so remotely related to human life as to have almost no bearing upon it. Spencer has accordingly classified knowledge as follows: 1. Knowledge of intrinsic value. 2. Knowledge of quasi-intrinsic value. 3. Knowledge of conventional value. Knowledge of intrinsic value is

that knowledge which bears upon the life of all mankind throughout all time. The knowledge that chlorine is a disinfectant, that tuberculosis is a disease caused by a microbe, that every thought or feeling one has burns away some of his brain substance, and scientific knowledge in general, is knowledge of intrinsic value. These truths will have a bearing on human conduct for all time. The extra knowledge of our language which the study of Greek and Latin gives us is knowledge of quasi-intrinsic value. It is of value to a part of humanity for a part of time, but is not of value to all mankind for all time. Knowledge of conventional value is simply fashionable knowledge. Much of Greek and Latin, and some parts of history, and neighborhood gossip well illustrate knowledge of conventional value. Much that is taught in the subjects mentioned scarcely has the remotest bearing upon human activities. It is fashionable to learn such things, and so people go on studying them without ever having thought out clearly what bearing they have on human life. So, in estimating knowledge, in general, that of intrinsic value takes precedence of that of quasi-intrinsic or conventional value.

Value of Knowledge-getting.—The process of getting knowledge is valuable from two view-points. The knowledge obtained furnishes guidance in human conduct, and the mind is exercised in the act of acquirement. The mind develops by exercise. That

is to say, the mind learns to think well by exercise in thinking. Thus the exercise of the mind to the end of development and strength is what is called *mental discipline*. So acquirement of any kind has two values: 1. A useful knowledge value. 2. A disciplinary value.

Thoughts Necessary to a Systematic Study of a Curriculum.—There are the following general thoughts to be kept in mind in the study of the school curriculum: 1. Life is divided into several lines of activity of successively decreasing importance. Do the subjects of the school curriculum give knowledge which will furnish guidance in some or all of these lines of activity? 2. Knowledge is of three kinds according to its worth,—(1) knowledge of intrinsic value; (2) knowledge of quasi-intrinsic value; (3) knowledge of conventional value. Is the knowledge given by the study of the various subjects of the school curriculum of intrinsic, quasi-intrinsic, or conventional value? 3. Acquirement of all kinds has two values,—(1) a useful knowledge value; (2) a disciplinary value. Do the various subjects of the school curriculum as taught give much useful knowledge and good discipline; or do some give good discipline and knowledge of little worth, and others give knowledge of much more worth, but furnish poor discipline?

Disciplinary Value Not Antagonistic to the Value as Useful Knowledge.—There somehow seems to be a thought current to a greater or less extent, that some

subjects are needed in the school curriculum because they have an excellent disciplinary value, even though their study does not give knowledge of much use in guiding one in right living: and another phase of the same thought is, that some subjects are needed in the school course because of the useful knowledge their pursuit gives, even though their study does not furnish mental discipline. This thought in its two phases has, without doubt, entered too largely into the considerations in making school curricula in the past. We may well ask ourselves the following questions: Is it not possible that those subjects the pursuit of which will give knowledge the most useful for guidance in correct living are the very same ones the pursuit of which will give the best discipline? Are there not enough subjects to make up a good curriculum which are among the very best as disciplinary subjects, and yet whose pursuit will furnish the knowledge most helpful for guidance in right living? Is not human life too short and human energy too limited to study some subjects for discipline alone and others for knowledge alone?

In the solution of any educational problem hints usually may be had from nature. Everywhere in nature we find capacities developed by performing the functions which it is their office to perform, and not through some exercise artificially arranged to fit them for the performance of these duties. The hunter acquires the discipline which makes him a

successful hunter only by the pursuit of game. The highest development of a power always results from the exercise in the work which the conditions of life require of it. The acquisition which gives knowledge the most valuable for guidance in right living must, according to the law of the "Economy of Nature," at the same time furnish the very best discipline. Dr. Arnold Tompkins says, in substance, the following on this point: This making discipline almost the entire object in teaching "is responsible for a sort of mediæval dialectics and fruitless beating of the air in teaching which passes as superfine method. It is Fichte's idealism and subjectivity run mad."

Direct Self-preservation.—The knowledge that gives guidance in these lines of human activities, too important to be left to be taught in school, Nature has taken into her own hands to teach. She is teaching the child his daily lessons in direct self-preservation by means of the falls, bruises, scratches, cuts, burns, and pains which befall him every day in his early life. Mother Nature teaches the lesson well that when one of the laws of life is violated, pain and misery are the inevitable result. But not being aware of all the safeguards which Nature has furnished us, we often violate her laws. What subjects have we in the school curriculum whose pursuit will furnish knowledge for guidance in these activities? The answer to this question is, that we have physiology and hygiene. The pursuit of these subjects

gives us the knowledge that our physical sensations and desires,—cold, heat, fatigue, hunger, thirst, etc., — are promptings which, if obeyed, would, to a large extent, provide for direct self-preservation. But so great an ignorance is there even yet of the laws of life that men do not appreciate fully enough that the sensations are the natural guides in direct self-preservation. Physiology and hygiene have it as their field of work to teach a better general knowledge of the laws of physical life and a fuller appreciation of the necessity and momentous importance of their obedience.

Surely no one will doubt the value of physiology and hygiene in the school curriculum who, “not to dwell on the natural pain, the weariness, the gloom, the waste of time and money thus entailed,” will “only consider how greatly ill-health hinders the discharge of all duties, makes business often impossible, and always more difficult; produces an irritability fatal to the right management of children; puts the function of citizenship out of the question; and makes amusement a bore. Is it not clear that the physical sins, partly our forefathers’ and partly our own, which produce this ill-health, deduct more from complete living than any thing else, and to a great extent make life a failure and a burden instead of a benefaction and a pleasure?” And it may further be added to this that the average length of human life is, by the violation of the laws of life, largely cut short.

Thus we come to see the dignified position of

physiology and hygiene in the school curriculum. This is very important for every teacher to see and *feel* to the end that he may teach these sciences conscientiously and well.

Indirect Self-preservation.—The knowledge which furnishes guidance in indirect self-preservation is that which helps in making a living. Every one recognizes the importance of this; and, indeed, by too many persons it is regarded as the main end and object of education. While every one is willing to agree that knowledge which furnishes guidance in acquiring a livelihood is of high importance, yet few have systematically thought out just what knowledge will do this best. In order to study this question to the best advantage, it is necessary to notice the main things men are employed in, and to this we turn.

What Things Men are Employed in.—The main lines of work in which men who are working for a livelihood are employed are as follows: 1. The production of commodities. 2. The preparation of commodities. 3. The distribution of commodities. By the production of commodities is meant the production of corn, wheat, hay, oats, beef, pork, coal, iron, wool, flax, poultry, fruit, lumber, leather, silk, cotton, linen, hemp, and a large number of other similar things. The preparation of commodities refers mainly to their manufacture; as the manufacture of machinery, food, clothing, etc. Distribution refers to sending such things to the points of consumption.

Now, the question may well be asked, What knowledge gives the greatest guidance in these things? It is evident that commodities could not be distributed without a knowledge of reading, writing, spelling, and arithmetic. Distribution requires railroads, canals, bridges, docks, the dredging of rivers; locomotives, cars, steamboats, and steam-ships. But the knowledge which guides in the construction of these is a knowledge of mathematics, physics, chemistry, and mechanics. That knowledge which guides in the preparation of commodities is, again, a knowledge of chemistry, physics, mathematics, and mechanics. That knowledge which gives guidance in the production of these various things again is a knowledge of chemistry, physics, geology, zoology, botany, and bacteriology. In short, the knowledge which has guided in the development of the production, preparation, and distribution of commodities is primarily *science*; and secondarily, mathematics, reading, writing, and spelling. Thus we see those subjects whose study furnishes knowledge that gives guidance in both direct and indirect self-preservation are almost wholly *science*.

The Rearing of a Family.—One is led to wonder, when he thinks of our school curricula, whether this division of human activities is to be considered of so little importance that no knowledge is needed to furnish guidance for them. On this point Herbert Spencer says: "If by some strange chance not a

vestige of us descended to the remote future save a pile of our school-books or some college examination papers, we may imagine how puzzled an antiquary of the period would be on finding in them no indication that the learners were ever likely to be parents. 'This must have been the curriculum for their celibates,' we may fancy him concluding. 'I perceive here an elaborate preparation for many things: especially for reading the books of extinct nations and co-existing nations—from which indeed it seems that these people had very little worth reading in their own tongue: but I find no reference whatever to the bringing up of children. They could not have been so absurd as to omit all training for this gravest of responsibilities. Evidently then, this was the school course of one of their monastic orders.'

However, there are in the school curriculum physiology and hygiene whose pursuit will give knowledge which furnishes guidance in bringing up children so far as the laws of their physical beings are concerned. But not enough emphasis is placed upon these subjects. The value of the knowledge furnished by their study has not yet been fully appreciated. On this point again we quote Spencer: "To tens of thousands that are killed, add hundreds of thousands that survive with feeble constitutions, and millions that grow up with constitutions not as strong as they should be; and you will have some idea of the curse inflicted on their offspring by parents ignorant of the laws of life."

The child not only has a physical nature, but he also has a moral and mental nature. For guidance in the moral and mental training of children there is next to nothing in our school curricula whose study gives the requisite knowledge. Psychology and child-study are the subjects whose pursuit gives the knowledge valuable for guidance in these activities. But few schools have these subjects in their curricula at present, and probably will not for a good number of years yet. "Be this as it may, however, here are the indisputable facts: that the development of children in mind and body rigorously obeys certain laws; that unless these laws are in some degree conformed to by parents, death is inevitable; that unless they are in a great degree conformed to, there must result serious physical and mental defects; and that only when they are completely conformed to, can a perfect maturity be reached."

Man's Duties in Social Institutions. — When one asks himself what subjects there are in the school curriculum the pursuit of which furnishes knowledge valuable for guidance in social duties, his mind turns to history. For it has been asserted over and over again that the study of history is to make good citizens. But when one stops to think whether history really does very much toward making good citizens, as usually taught, it does not seem very clear. It is safe to say that if history were properly taught, it would give a large stock of knowledge valu-

able in furnishing guidance not only in citizenship, but in the other institutions of society. But in order that it may give this guidance, history must not be taught as a "record of events;" neither must it be taught as isolated events, nor must the entire time be spent on the state as an institution of society. To accomplish this desired result history must be regarded as *the struggle of the race in its efforts towards higher life*. This struggle must be seen to have been one in all the institutions of society,—the family, the school, the church, industrial life, and the state. It must be seen, too, that in human action there is a seed-time, a period of growth, and a fruitage as truly as in the vegetable world. But as history is often taught it certainly is not worth much for guidance in man's social activities.

Literature, if rightly taught, is a good subject to furnish guidance in this line of human activities.

The interpretation of both history and literature requires a knowledge of psychology. If one knew absolutely nothing about the human mind, he could not interpret history or literature at all. And certainly one who has an organized, systematic knowledge of psychology will interpret better than he who has but a fragmentary, unorganized knowledge of psychology. Spencer speaks as follows on this point: "Without an acquaintance with the general truths of biology and psychology, rational interpretation of social phenomena is impossible." And again, "all

social phenomena are phenomena of life—are the most complex manifestations of life—are ultimately dependent on the laws of life—and can be understood only when the laws of life are understood.” Thus, then, we see that for the regulation of this fourth division of human activities, we are, as before, dependent on *science*.

Spending Leisure Time.—While “life should be full of earnest work,” and “all labor is noble and holy,” yet a life with no leisure is drudgery, and is not most to be desired. All should have some leisure time, and should know how to spend it. This time should be spent in the enjoyment of Nature, in the enjoyment of literature, and in the enjoyment of fine arts,—Architecture, Sculpture, Music, Painting, and Poetry. The subjects whose pursuit will furnish knowledge valuable to guide one in the enjoyment of nature are, of course, those subjects which treat of Nature. That is to say, they are the natural science subjects: botany, zoology, geology, astronomy, chemistry, and physics. That subject which gives knowledge valuable for guidance in enjoying literature is directly the school subject, literature. And to this should be added psychology, which aids largely in the interpretation of literature. Music, now in many school courses, is the subject which gives ability to enjoy music. In the average school curriculum there is nothing which directly prepares one to enjoy architecture, sculpture, and painting. For the en-

joyment of poetry literature, as a subject, and psychology prepare us.

From this study of the school curriculum one wonders why so much time in many schools is spent on Latin and Greek. It is difficult to show how the study of Latin and Greek will give knowledge valuable to any large extent for guidance in living. In fact, they have not much claim to a place in a school curriculum because of the valuable knowledge their pursuit furnishes. Their claim to a place in the school curriculum rests upon the idea that they are good disciplinary studies. But we have seen in previous study that it never pays best to study a thing merely for discipline when the world is so full of subject-matter the mastery of which gives the best discipline and valuable knowledge, too.

Most Valuable Knowledge.—The whole study of the school curriculum points to the fact that those subjects whose study gives the most valuable knowledge for guidance in living constitute the group called *science*. Science has liberated humanity from the bondage of superstition. Science has tunneled mountains, bridged rivers, and spanned continents. Science has harnessed waterfalls that they may do man's bidding. Science has made the lightning to minister to man's wants. Science has prevented plagues, stamped out zymotic diseases, and made it possible for man to inhabit every part of the earth. In short, science has been the vitalizing force which

has raised the Anglo-Saxon race from mediæval barbarism to the civilization at the close of this, the nineteenth century. Science more than all other things has wrought these changes in family, church, state, and industrial life.

Religious Aspect of Science.—The following from Herbert Spencer on the religious aspect of science is worthy of careful attention from every teacher: "It (science) alone can give us true conceptions of ourselves and our relation to the mysteries of existence. At the same time that it shows all which can be known, it shows us the limits beyond which we can know nothing. Not by dogmatic assertions does it teach the impossibility of comprehending the ultimate cause of things; but it leads us clearly to recognize this impossibility by bringing us in every direction to boundaries we can not cross. It realizes to us in a way which nothing else can, the littleness of human intelligence in the face of that which transcends intelligence. While towards the traditions and authorities of men its attitude may be proud, before the impenetrable veil which hides the Absolute its attitude is humble—a true pride and a true humility." "Only the genuine man of science, we say, can truly know how utterly beyond, not only human knowledge, but human conception, is the Universal Power of which Nature, and Life, and Thought are manifestations."

Child-Study and the Curriculum.—We will not lose

sight of the fact that we started out to see whether our school curriculum is a rational one or not. And in pursuit of a solution of this problem we have found out what subjects are the most valuable for study. But there is another phase of this subject to be studied before we can decide whether or not the school curriculum is a rational one. The question is, Are the subjects in the school course taught at the time in the child's life when they are best adapted to his stage of development? No one would say a school curriculum is rational that provides the study of logic, psychology, or calculus for the child of eight. In the solution of this problem child-study helps us. Much systematic, painstaking, and exact study has recently been given to children. To many people it seems absurd that anything very new or very remarkable should just now be found out about children. And many oppose it, or like to speak of it in a disparaging manner. But this opposition proves nothing conclusively, for students of history know that every advance in science has met similar opposition. For instance, the opposition to astronomy.

Changes in Curriculum Suggested by Child Psychology.—“Our increasing knowledge of the child's mind, his muscular and nervous system, and his special senses points indubitably to the conclusion that reading and writing, are subjects which do not belong to the early years of school life, but to a later period, and that other subjects now studied later are

better adapted to this early stage of development. What is thus indicated of reading and writing may be affirmed also of drawing and arithmetic." The physiological and psychological reasons for the above statement can not be discussed here. Suffice it to say that the study of these things early in school life produces nervous diseases, and arrested development; also, diseases of the eye, particularly, myopia. There is, too, a great loss of time and energy, and bad mental habits are formed. Child-study undoubtedly points to the fact that *nature study*, *oral history*, and *story*, and free activity of the larger movements of the body should constitute the curriculum for about the first four years of the child's school life, and that reading, writing, spelling, drawing and arithmetic should come later.

So the answer derived from our study is, that we certainly have not, as yet, a rational school curriculum.

CHAPTER VII.

THE TEACHER.

Importance of the Teacher.—While from the standpoint of the work the school has to do the learner is the most important element in the school, there certainly is reason for regarding the teacher the most important element of the school from another viewpoint. It is true that the school exists for the learner, and without him there would be no teacher, school house, curriculum, or school officers. The development in the child's life is the end to be attained, and all parts and processes in school work are means to this end. The end is always more important than the means in all rational processes. So, in a sense, the teacher stands in the relation to the student of means to end. But when we look at the teacher as the element in the school upon which its success or failure so largely depends, that is, from the viewpoint of the school performing its work, the teacher seems the most important element of the school. There is much truth in the statement, "As the teacher is, so will be the school." He is the life-giving element in the school. If the teacher is properly qualified, loves his work, and has a sympathetic

insight into the lives of his pupils, hardly anything can make a failure of his school.

Duties of the Teacher.—The duties of the teacher are, indeed, many. He must poke the fire, sweep the floor, keep proper ventilation, oversee the care of school grounds, and vigilantly watch school property; tie up cut fingers, doctor bruised heads and limbs, soothe the sorrows of some and rejoice in the joy of others; encourage the brave, generous and true; frown upon the cowardly, selfish and deceitful. He must assign lessons, hear recitations, correct the wayward, and encourage the good of all kinds. From this inventory of the teacher's duties it seems at first sight as if we can get nothing but chaos. A little thought, though, will show that these duties may be grouped into two classes: 1. His duties in keeping the organization running with the least possible friction, —governing. 2. His duties in leading the child into those experiences which will constantly make for truth and righteousness, —teaching.

Governing. —A mistake the teacher often makes in school is in thinking he is a legislator as well as an executive. He thinks this and so acts that the students think it. No worse mistake than this can be made in school government. Instead of the teacher's thinking that he is a legislator and that laws of the school originate in him, he should understand that the laws of the school are inherent in the organism itself. The pupils should be led by the

conduct of the teacher to appreciate this fact, in so far as they are able, also. The teacher is governor in that it is his duty to call attention to the laws of the school, explain them, and execute them. This question will receive a fuller discussion in a succeeding chapter.

Teaching.—The teacher's duties in teaching are both positive and negative. From the positive side he is to guide the child in the development of all that is good in his nature, and in the acquisition of knowledge which will furnish guidance in right living. While the child is born with capacities for becoming good, he has also capacities for becoming bad. "The child inherits not only the good proclivities and propensities of his long line of ancestors, but he inherits also bad feelings and emotions. His heart is not altogether a good heart; it overflows not only in goodness but also at times more or less frequent, in selfishness, rancor, bitterness, cowardliness; in short in excesses and defects of various kinds." So, from the negative side the teacher will find it his duty to eliminate the evil tendencies from the child's nature.

Positive Duties.—Every experience the child has affects him more or less permanently. Those experiences which hinder the development of the better self may be said to have a negative value. So, the teacher's positive duties are to arouse the experiences in the life of the child which constantly lift him to a higher plane of living. Such experiences are along

six lines, — physical, intellectual, æsthetic, social, moral, and religious. And this is what it means to teach, considered from the positive side. That is to say, to teach is to arouse those experiences—physical, intellectual, æsthetic, social, moral and religious—in the life of the learner to the end that he may continuously grow into a higher life.

Negative Duties.—But the teacher must not lose sight of the fact that the tendencies, propensities and proclivities for wrong doing born in the child, inherited from his long line of ancestry must be eliminated. Some teachers make a mistake by thinking the child is naturally good. Rousseau made this very mistake in his education of Emile. The child is a young savage, and the savage characteristics are to be eliminated from his life. But these characteristics can not be effectively suppressed in the life of the child by simply attempting to root them out without supplying their place with something. That is to say, education can not be alone negative or not even largely negative. The only safe plan is to eliminate the bad by building up the good in its place. No teacher or parent will succeed well in educating his children who everlastingly has his eye fixed on the things which the children ought not to do. He must supply the good to take the place of the bad. In teaching, as well as in algebra, a good way to get rid of the undesirable element is to eliminate by substitution. An element must not be removed and a vacuum left.

Characteristics of the Teacher.—In studying the characteristics of a teacher one is impressed, at the start, with the fact that there are some qualities the teacher must have, if he teaches at all, and that there are others desirable which not all can possess. Of the first class scholarship is an example, and of the second class good health and fine native ability are examples. The first class of attributes of the teacher we may call *necessary attributes*; the second may be called *supplementary*. Without the first set the teacher must be a failure. The second set, while not absolutely necessary to the success of the teacher, are desirable and facilitate the ease with which success is attained.

Necessary Characteristics.—As said above, these are absolutely necessary to any marked degree of success on the part of the teacher, and are as follows: 1. Strong moral character. 2. Scholarship. 3. Professional preparation. 4. Energetic, student's habits. 5. The habit of daily preparation. 6. Love of occupation. 7. Sympathy with child-life. These will be studied somewhat in detail.

Strong Moral Character.—About 1650 Comenius said, in substance, "The teacher should be an example, in person and conduct, of what he requires of his pupils." Comenius said a great many true things, but he never said a truer thing than this. And it is just as true to-day as it was when it was first said. It is sincerely to be hoped that we all believe

from our study of the purpose of education, that a high type of moral manhood and womanhood is the end to be sought in all school work, and that all the rest of the school and school processes stand in the relation of means to this as the end. And since we are better understanding the power of suggestion, we begin to realize what an influence on the life of children the example of the teacher has. Slovenly habits of thought, slovenly habits of dress; slang, impure English, profanity, by-words; smoking, chewing tobacco, dishonesty, injustice and selfishness all impress the life of the child and tend to reproduce themselves in him. No teacher who uses tobacco—smokes or chews—is careless of his English, or in any way shows himself cowardly or dishonest can be as good a man as he would be without those traits, and since anything which detracts from manhood detracts from the teacher, it is equally true that he can not be as good a teacher as he would be without those characteristics.

But while all of us can agree as to the desirability of strong moral character for the teacher, to talk of it in the abstract without knowing very definitely what it means is not sufficiently helpful. An analysis will show that, at the least, the following elements enter into moral character: 1. A knowledge of right and wrong. 2. Truthfulness. 3. Honesty. 4. Justness. 5. Habits of activity. 6. Self-control. Each of these will be studied briefly.

Knowledge of Right and Wrong.—It will be recalled that this very point was studied in a previous chapter, and the conclusion was reached that in order for one to have strong moral character he must have ability to think out the right and wrong in human activity. A man's motive may be good and the activity prompted by that motive be very bad. To say that a man may have strong moral character and be at the same time ignorant of the laws of common living and every-day actions is to place a premium on ignorance. It is certainly a doctrine that will result in much evil to hold that an act is good provided it is done with good intentions, notwithstanding much human misery and unhappiness result from it.

Truthfulness.—It seems so evident that truthfulness is an element of morality that it needs no study to show it. There is a phase of this point which enters largely into school work. Teachers have feared to say "I don't know," lest pupils would lose confidence in their ability. It does not follow that if the teacher honestly acknowledges he does not know, when it is the case, the pupils will lose confidence in his ability. If it did have to be so, it would still be a question of whether it is preferable for students to lose confidence in one's ability, or to lose confidence in one's truthfulness. But students are reasonable. They do not expect that the teacher will never make a mistake, nor that he will know the correct answer to every question that comes up. They further know

that they have no right to expect so much, but they also know that they have a right to expect the teacher to be perfectly truthful.

Honesty.—Honesty and truthfulness seem much the same thing, as elements of character. They, however, emphasize different phases of moral character. Truthfulness refers to the representation of things as they are, and so refers to one's representing things thus. Honesty refers to uprightness in the actions of one person to another. In honesty questions of advantage and disadvantage are involved. There are many ways in which a teacher's honesty is involved in school work. The student's instinct for truth and honesty will assert itself to the extent that he will appreciate those qualities in a teacher. And pupils are quick to detect these as well as the opposite. "It is a great misfortune for a child to be under the influence of a teacher who deceives patrons and visitors as to the real attainments of pupils; who trains his pupils to seem to know what they do not know—as in public examinations, so called; who assigns false reasons for his acts; who pretends not to be watching pupils that he may 'catch them in mischief;' who makes promises that he does not intend to keep, or, what is about as bad, forgets to keep; who pretends to know that of which he is ignorant; who marks pupils in the absence of knowledge; or who, in other ways, departs from the truth. In truthful-

ness, the teacher can not be a sign-board. He must himself go the way he points."

Justness.—In school work, justice does not mean that all students must be treated alike. It is a traditional maxim of school which has worked much evil, that all students must be treated alike. This usually refers to corrections and rewards. Now, scarcely any one would think that in the act of teaching all are to be taught in just the same way, but somehow in the matter of corrections and rewards the idea is more or less prevalent that all students are to be treated in the same way. In the matter of being just individual difference of children must be taken into consideration as well as in the teaching act. A little thought here will call to the mind of every student and teacher numerous illustrations of this point.

It requires some firmness on the part of the teacher to be just. The teacher may err from the side of kindness, or from a hypercritical spirit. Too often the teacher because of kindness, I think, fails to have the student see just what his recitation or paper is worth. A paper graded on the scale of a hundred is marked seventy-five per cent. when justice would show it to be worth thirty or forty per cent. A recitation worth nothing is smoothed over and patched up by the teacher till the pupil is deceived into believing that he has done something creditable. Justice may at times seem severe, but its very severity is educative in a high degree.

Justice after a period of growth always brings a fruitage much to be desired. The profession is in need of teachers with courage to give the children credit for just what they merit, no more and no less.

Habits of Activity.—No one can be a sluggard and be a moral man. Morality means activity. There are some people who think that if one simply does no harm he is entitled to be called good. That is to say, some hold that activity is not a necessary element of goodness in man. A little study here, however, shows the fallacy of this doctrine. If one asks himself the question, "When is my lead pencil good?" or "What is a good knife?" and stops to think out the answer, he will find that he will soon reach the conclusion that the lead pencil or knife is good that does its work well. That is, goodness refers to the ability or adaptability of a thing to do its work. And this is the meaning those very persons who hold this peculiar view regarding goodness have concerning all things except man. How men are an exception to this general truth is not clear. Also, if a man who does nothing either good or bad and thus does no harm, is good, the question, "What is he good for?" suggests at once the answer, "good-for-nothing." It can not be made too strong that, under normal circumstances, a strong moral character means a life of intense activity.

The teaching profession has no need of teachers who find nothing to do after 4:00 P. M. and before 8:30

A. M. And least of all have the growing lives of the children need for such teachers.

Self-control. — It seems unnecessary to emphasize the fact that self-control is an element of morality. A brief study of the lines of self-control is, however, in order. Though scientifically control is usually classified as (1) physical; (2) prudential, and (3) moral, for our purpose it may be thought of as: 1. Control of the appetites. 2. Control of one's actions. 3. Control of one's language.

No person who lets his appetites go without restraint can be a moral person. "No heart is so pure, no soul is so noble, that physical appetite long unrestrained does not corrupt. Every mother has it in her power to *form* the tastes and appetites of her children. They are always *formed*, but the process of *re-forming* is frequently a heart-breaking failure." Now, the teacher may have an influence in this *forming* of tastes, but not until he has correctly formed his own. Many a teacher has lost his opportunities for doing good in a school by lack of ability to act calmly and reasonably under trying circumstances. A successful teacher must guard his actions not only under trying circumstances, but all the time, even under the most usual circumstances.

Controlling one's language is certainly an element in moral character under any consideration, but the control of the teacher's language is an element of great importance in successful teaching. A word of

encouragement here, a kind word there; a word of approval for this effort, a word of disapproval for lack of effort; a mild, pleasing tone at all times; such, other things equal, are among the most important elements that go to make the ideal teacher. Sarcasm, irony, blustering, boisterous tones keyed to a high pitch are among the most disorganizing attributes a teacher can possess.

Scholarship.—That a teacher must possess scholarship in order to teach at all is unquestioned. No one can teach what he does not know, and it is just as true that no one can teach *well* what he does not know well. Nothing gives more confidence to the teacher, and nothing is more inspiring to the pupils than to know that he is master of his subject. It is a deplorable condition of things that compels teachers to teach subjects about which they know barely enough to make a grade for license. To teach well a subject a teacher should know it first and last and all the way between.

A school subject is a group of facts, these facts having a relation among themselves peculiar to that subject alone. The teacher who knows his subject will not only see these facts, but he will see the relation of these facts to each other and to the subject as a whole. With such a knowledge of his subject the teacher sees the end from the beginning, is able to distinguish the important from the unimportant, and to organize his work. A lack of scholarship makes

the teacher a slave to a text-book, instead of being as he should be a source of self-directiveness in the subject. Other things equal, the teacher who knows his subject well will certainly do superior teaching.

Professional Preparation.—Professional preparation from the teacher's view-point means a mastery to a greater or less extent of those subjects that will furnish the teacher guidance in his actual work in the school-room. Everyone who enters the professions of medicine or law recognizes the need of study which will give guidance in his special work. That is to say, special preparation is required for professional work. This is not less true in the teacher's work than in the other professions. A brief study will show that a teacher's professional preparation consists in general of the following:

1. A knowledge of the laws of life.
2. A knowledge of the purpose of education.
3. A knowledge of methods.
4. Practice in the art of teaching.

Each of these will be studied to some extent.

A Knowledge of the Laws of Life.—The life of the child presents itself to the teacher in two phases,—physical and spiritual. The teacher learns the laws of the child's physical life in the pursuit of physiology and hygiene. And the subject which treats of the child's mental life is psychology. So this brings us to the discussion of the question, Must the successful teacher know physiology, hygiene and psychol-

ogy? We can study this question in two ways. First, we can depend upon our own ability to think it out; and secondly, we can study what our educational thinkers have thought about it.

What Our Study Shows.—If we will remember that the educational process is both a physical and spiritual one, but always a living process whose success is to be measured in terms of the child's life, we will be in the right attitude of mind to study the question.

If a teacher knew absolutely nothing of the laws of life, he could not teach school a day, an hour, or even a minute. He could not tell whether beef or arsenic would be food; whether a child would be comfortable in an atmosphere at freezing point or at the boiling point; whether he would be more comfortable sitting down, running, or standing on his head; nor could he decide on any physiological or hygienic question concerning the child's welfare. Neither could he tell how, when, or why to teach any point of knowledge. He would not know whether to begin the study of geometry, logic, or reading with the child of six or with the child of sixteen. Without some knowledge of the laws of life, the teacher could not (1) provide a suitable course of study; (2) arrange his school into classes; (3) assign lessons suited to his pupils; (4) interpret his pupil's behavior; (5) know whether his pupils grasp the topics of the lesson. In short, he could not teach at all. Then to teach school

at all a teacher must know something of physiology, hygiene, and psychology. Every teacher of course knows something of these subjects, but it is worth while to stop long enough to examine into the condition of much of this knowledge. It will be found in most instances to be fragmentary, chaotic and unscientific. Now, the question is whether this fragmentary, unscientific knowledge of physiology, hygiene, and psychology will be more helpful to the teacher in teaching than a systematic, scientific knowledge of these subjects. Every one knows something of science, the knowledge having been picked up in fragments from experience, but it is not this kind of knowledge that has caused the progress of the world. The knowledge which has caused civilization to move forward with such strides in the present century has been that which was systematic and scientific, not the fragmentary and unscientific kind. Thus the question we started out to study has reduced itself to the following: First, a teacher must have some knowledge of psychology, physiology and hygiene to teach at all. Secondly, the teacher through experience may acquire a fragmentary, chaotic, unscientific knowledge partly right and partly wrong, always superficial, of these subjects. Thirdly, the teacher may acquire through careful study a scientific knowledge of these subjects. Fourthly, scientific knowledge is the world over the kind most valuable for guidance. Surely no one is so obtuse as to claim that

a superficial, fragmentary knowledge of psychology, such as every one has, is better for guidance in teaching than a thorough systematic knowledge of the subject. Then since a teacher must have one of the two kinds, common sense teaches which is the better. So, our study leads us to answer the question, Must the successful teacher know psychology? in the affirmative. He certainly must.

What Educators Think of the Question.—There are two classes of *quasi* teachers who oppose the study of psychology as a part of a teacher's preparation to teach school. Those of the first class are the ones who, it seems to me, see psychology as a speculative, metaphysical study of those things about which no one can do more than speculate or conjecture—what goes by the name of metaphysics in contradistinction to psychology. This class sees nothing in the study of psychology but discipline, because to them there is no such thing as educational psychology. There are but few of this class, the most of them having died of old age. Those of the second class know little or no real psychology, and so oppose it, because to acknowledge its usefulness is to acknowledge a criticism on themselves. With this second class, the wish has been father to the thought. It is absolutely certain that his knowledge of psychology never yet helped that teacher who knew no psychology, to teach.

The rapid strides with which pedagogical work

has been coming into schools of every kind is evidence of what is being thought on this subject. Every normal school, private and public, every college and university now has its pedagogical department. And this state of things is very recent. Now, psychology is the basis upon which the whole superstructure of pedagogy stands. Teacher's examinations almost everywhere now demand a knowledge of professional subjects.

Thoughts of the Thinkers.—William T. Harris says: "If the teacher knows nothing of psychology as a science, he must copy in detail the methods of others, and rely on his general knowledge of human nature derived from experience. Like all uneducated workmen, he may succeed after a sort by following tradition unaided by science, but he will not develop beyond a narrow degree of perfection in details. He will have no insight into the general relations of his work. He can not safely deviate from routine, nor venture to criticise his own work or the work of others. If he has learned good models, he may pass for a good teacher; if he has learned bad ones, he is unable to perceive their defects. Possessing no scientific knowledge of the mind he cannot lift himself above the details of his art to the principles which govern them, and become himself an original source of directive energy. Some knowledge of the mind every successful teacher must have, although

in so many cases it is unsystematic, and consequently unscientific."

The same author says of child-study, which is a kind of psychology: "Child-study in this way (by experimental study of children) will furnish us more valuable information for the conduct of our schools than any other fields of investigation have yet done."

Herbert Spencer, the greatest English philosopher, says: "Grant that the phenomena of intelligence conform to laws; grant that the evolution of intelligence in a child also conforms to laws; and it follows inevitably that education can be rightly guided only by a knowledge of these laws. To suppose that you can properly regulate this process of forming and accumulating ideas, without understanding the nature of the process, is absurd. How widely, then, must teaching as it is, differ from teaching as it should be; when hardly any parents, and but few teachers, know anything about psychology." "The development of children in mind and body rigorously obeys certain laws; unless these laws are in some degree conformed to by parents, death is inevitable; unless they are in a great degree conformed to, there must result serious physical and mental defects; and only when they are completely conformed to, can a perfect maturity be reached."

Prof. William James, after telling teachers not to expect too much from psychology, says: "But, if the use of psychological principles thus be negative

rather than positive, it does not follow that it may not be of great use, all the same. It certainly narrows the path for experiments and trials. We know in advance, if we are psychologists, that certain methods will be wrong, so our psychology saves from mistakes. It makes us, moreover, more clear as to what we are about. We gain confidence in respect to any method which we are using as soon as we believe that it has theory as well as practice at its back. Most of all, it fructifies our independence, and it reanimates our interest, to see our subject at two different angles,—to get a stereoscopic view, so to speak, of the youthful organism who is our enemy, and, while handling him with all our concrete tact and divination, to be able, at the same time, to represent to ourselves the curious inner elements of his mental machine. Such a complete knowledge as this of the pupil, at once intuitive and analytic, is surely the knowledge at which every teacher ought to aim."

Without multiplying quotations, let it be sufficient to say there is scarcely an educator of note or reputation among civilized peoples who does not speak in the same general way on this subject. A knowledge of psychology is absolutely no guarantee of a good teacher, but it is certainly as true that no one can be a highly successful teacher without a knowledge of psychology.

1. *Purpose of Education.*—The nature of the purpose of education has been studied before, but it remains

to study why the teacher should have as nearly correct views as possible of the things to be accomplished by the educating process. Since the purpose of education is one with the purpose of life, the question to be studied is the importance of the correct view of the purpose of living.

One may possibly wear his religion on Sundays, and put it off on week days. But his view of the object to be accomplished by education will show itself in all he does. Every act in the school-room will be affected by it. If he has wrong views of the object of the educating process, every assignment will be tinged by it; every recitation will be colored thereby; every correction or direction will be steeped in these false ideas. If he has the right ideas of life and education they will manifest themselves in all his school work. If he has no definite ideas of education and life, his work will be purposeless, scattering, disorganized and fragmentary. A clear, fervent purpose will draw the teacher's work toward its accomplishment as surely as the magnet attracts the particles of steel. It can not be made too strong that every teacher should have the true purpose of education so well fixed in his life that it may become, in truth, a part of him.

Knowledge of Methods.—The term *method* is employed in two senses by educators. Popularly, it means the manipulation of means external to the life of the child in the process of teaching. Scientifically,

it means the activities of the student's mind in the process of learning. In either sense the teacher must know method. For to know method in the first sense is to know what means to use in teaching, and how to use them, and to know method in the second sense is to know the mental steps the student's mind takes in learning any point of knowledge.

It has been held by some that if the teacher knows his subject well he can teach it well. This, however, is not true. Nothing is commoner in teaching than persons who know their subjects well, but who teach poorly. Dr. Groszman says on this point: "The professional training of teachers is not generally high. Many people still entertain the idea that to know a subject is a guarantee of the ability to teach it. Nor is it easy to demonstrate the fallacy of this notion to those who are ignorant of the laws that govern the workings of the human mind."

A little thought will show that to know, first, the means to be used; secondly, how to use them; and thirdly, the activities of the child's mind in the process of learning any subject is of equal importance in successful teaching with knowing well the subject. This point will receive a full study in chapter nine.

∠ *Practice in the Art of Teaching.*—One becomes skillful in doing anything by practice only. Thus one becomes skillful in writing by practice in writing; skillful in riding a bicycle by riding; skillful in ball-playing by playing ball. This is a principle that

holds true in the acquirement of any art. And since teaching is an art the principle applies to it. So a teacher to become skillful must have practice in the art of teaching. This practice may be obtained in two ways. First, by teaching as a student-teacher under the direction of a skillful training-teacher in what are known as training schools. Secondly, by teaching in one's own school without having had any practice before, and thus acquiring the skill by experience without direction by a training-teacher. It is evident that learning to teach by the latter way is pretty hard on the pupils which the teacher practices upon. It is too much a matter of experiment, and is very like a physician's learning to practice medicine by experimenting upon his patient. But everywhere the innocent little children in our schools are the victims of such experimenting. If it is a deplorable set of conditions that compels persons to teach who have merely enough knowledge of the subjects to secure license, it is certainly not a less deplorable set of conditions that compels teachers to experiment thus with the innocent lives of our children.

1. *Energetic Student Habits.*—The living teacher must be a constant worker. He will ever keep before him a higher degree of excellence in all lines of work toward which he will constantly strive. A teacher never reaches a place in his school work where he can safely rest on the oars and drift. There is absolutely no way to have a thorough, fresh knowledge of the

subject taught: to keep in mind the best educational methods and other ideals than by constant industrious student habits. Everything that lives progresses, and nothing progresses more rapidly than the science and art of education. One as a teacher simply can not rely upon his past preparation to guide him safely and successfully through in teaching. He must keep up with the educational progress or he will be an "old foggy" and a "fossil" sooner than he is aware. The educational world demands thoughtful, progressive teachers. "To reach the port of heaven, we must sail sometimes with the wind and sometimes against it,—but we must sail, and not drift, nor lie at anchor."

Dr. Groszman says on this point: "Not every scholar is necessarily a teacher, but every teacher must be a scholar. By the latter I mean he must possess the scientific spirit—that spirit which is concerned not alone in the accumulation of a vast number of facts, but also, and mainly, in the intelligent use of those at hand. He must, on his own account, aspire to knowledge such as will expand his own personality and widen the horizon of his interests, in order that he may be able to personate, to his pupils, if only in a modest way, the incorruptible dignity and the salutary influence of true science. If the teacher's interests be confined to the four walls of his school-room, he runs the risk of becoming narrow, and self-complacent, petty and nagging. He must be con-

versant with the great problems of his age, so that he may keep steadily before him the great aim of all educational effort."

Daily Preparation.—No teacher ever knows a subject so well as to be able to teach it to the best advantage without making daily preparation. This is true because no lesson is ever taught at any two times under the same set of circumstances. Students to whom the lessons are to be taught will vary in capacity and other particulars. So each lesson must be prepared with the view of teaching it to the particular class one has, if the very best teaching is to be done. A teacher who teaches without daily preparation shows staleness in his work; his teaching lacking all that freshness, vigor, and interest born of seeing something new in the subject. This is true, because going over the same thing again and again without seeing anything new of necessity grows monotonous and uninteresting, while on the other hand no one ever knows a subject so well but that he can see something new in it by his study in daily preparation. Again, for most teachers it is the only remedy for avoiding the evils that flow from a meager knowledge of the subjects. The teacher who will succeed best will be the one who will "get out" his lessons daily. This he expects of his students, and this his students have a right to expect of him.

Love of Occupation.—Every one knows with how much more zest work which one likes to do is done

than work which one does not like to do. Too many teachers make school teaching a stepping-stone to some other kind of work and so never really prepare themselves for teaching. Not being in love with teaching is doubtless largely the cause of this. Dr. Groszman says: "Teaching has become a profession with only a very few. The teachers found employed in many of our schools are either young men, who use the position in a public school as a stepping-stone to 'something better,' or young girls, who desire to fill the interval between their school-days and married life, with some sort of respectable occupation." No teacher who does not like to teach school can show so much interest, enthusiasm, aggressiveness and progressiveness in his work as he would if he loved the work. Love for the work will lighten the labor, will put the spirit of life in it. Otherwise teaching becomes the veriest drudgery, a thing to be endured only.

Sympathy.—The ability of the teacher to rejoice with his students in their joys and triumphs, to grieve with them in their griefs, in short, to be in sympathetic touch with their lives is the characteristic above all others that influences children's lives. Such a teacher is one of heart power—the one who can love the erring and wayward. In teaching, sympathy covereth a multitude of sins.

It is unfortunate for the children that circumstances are such that our teachers largely teach

school at a period of life when they have the least sympathy for children. From the age of sixteen to the age of thirty is the period in life in which young women and young men have the least sympathy for children. This is the period in which young men and young women are most interested in themselves and in each other. Before sixteen and after about thirty they have more sympathy for child life. But this is the period in which most men and women teach school.

Sympathy for child life is idealized in the following, attributed to Dickens:

They are idols of hearts and of households,
They are angels of God in disguise;
His sunshine still sleeps in their tresses,
His glory still beams in their eyes.

Those shouts of home and of heaven
Have made me more manly and mild,
And I now know how Jesus could liken
The Kingdom of God to a child.

My heart grows as tender as woman's,
And the fountains of feeling will flow,
When I think of the paths steep and stony
Where the feet of these dear ones must go.

O, the mountains of sin that o'er hang them!
O, the tempests of fate blowing wild!
But I know there's nothing on earth so holy
As the innocent heart of a child.

Desirable Characteristics, Though Not Absolutely Necessary.—There are several characteristics that greatly facilitate a teacher's success, but which not all teachers can possess, and without which success in teaching may still be attained. A few of the most important of these will be mentioned and briefly studied. The following may be noted: 1. Good health. 2. Natural aptitude. 3. Personal magnetism. 4. Mastery of circumstances.

Good Health.—The relation between the mind and body is so close that whatever in any way militates against efficiency of bodily functions affects the mind. Dispositions and temperaments are direct outgrowths of bodily conditions. To do one's best work of any kind requires a healthful, vigorous, vivacious condition of the nervous system and muscular system. Aggressive, vigorous, efficient work are the accompaniment of health. Ill health induces weakness of effort, irritability of mind, despondent and depressed states of spirit, discouragement and dreariness fatal to all successful teaching and school government. Ill health makes all work drudgery, amusement a bore, and life a misery and a failure. The longer one lives the more fully he appreciates this fact. Then one of the highest duties towards his school is for the teacher to make all reasonable exertions to keep his health at high water mark.

Natural Aptitude.—No doubt there are persons who are to some extent natural teachers; that is, are

naturally adapted to teaching, while others have no ability in this line. There are persons who naturally show an aptitude in music, while others can never reach any marked degree of proficiency in music. The same is true of teachers without doubt. This is a desirable characteristic, and one that must be possessed by every teacher to some extent, but one which not all, not even a majority of teachers, greatly possess. It is probably true that most persons can become successful teachers with due preparation. However, it is just as true that there are some who when they attempt to teach have entirely "missed their calling." There are some whose native ability for teaching is such that they will never succeed at this work. Such people, who may be most excellent men and women, may succeed well at some other line of work. Frœbel and Pestalozzi succeeded well at nothing else but teaching.

Personal Magnetism.—This is an endowment important and real, but perhaps beyond the control of many. It "neither falls from the sky nor springs from the ground." However, it is the endowment which makes friends for the teacher both in school and out, and is not as some suppose, altogether a natural endowment. Some of the elements that go to make it up are, pleasant greeting, general friendliness, sympathy, charity, frankness, and a pleasant voice. It is worthy of note that several of these elements may be acquired by cultivation,

Mastery of Circumstances.—By this is meant a marked ability to know what to do next under any set of circumstances. There are persons who never know what to do next under any set of circumstances except the most usual, while again there are persons who always seem to know what to do in any set of circumstances. Now the teacher has much need of belonging to the latter class, for a school is a place famous for the uprising of unusual circumstances. A teacher must possess the ability to meet the occasion to some extent, otherwise he could not get along for a day. But perhaps not all can possess this endowment to the extent desired.

Illustration.—A student upon an occasion of failure in recitation in a class, insisted he had no right to believe anything he could not see. Various illustrations were given by the teacher to show the position taken by the student was not only untenable but unreasonable. The student would not see his error. The teacher mildly and pleasantly asked the student if he believed he had a brain. A smile went around the class and the student took his seat without a word.

CHAPTER VIII.

THE MANAGEMENT OF THE SCHOOL.

Importance of.—There is no subject that enlists the intellect or appeals to the emotions of the teacher, of more far-reaching importance than this one of school government. Upon the successful solution of the question, How best manage a school? depends the efficiency of all the school processes. The teacher who fails in school government fails in all, because the other school work bears such a relation to school discipline that they can not be separated. To the beginning teacher it is the most vital school question. It is the rock upon which more teachers have been shipwrecked in their careers than upon any other. It has caused more sleepless nights, more shattered nervous systems, more hot, scalding tears than any other school problem.

The School an Organization, or Organism.—In our study of the nature of the school in the first chapter of our pedagogy work, it will be remembered we found that the school is an organization, and that the ideas that enter into an organization, according to the best use of the term, are:

1. It is a complex whole.

2. This whole is made up of individual parts.

3. These parts have a harmonious working relation.

4. These parts work for one common end.

5. The whole is self-acting and self-adjusting.

Thus the school is made up of pupil, teacher, subject-matter, school officers, etc., all constituting a complex whole, the individual parts being patrons, school officers, children, teacher, etc., these all work together in such a way as not to produce friction, and as to economize energy to the greatest degree. This is what is meant by a harmonious working relation. The education of the pupil is the common end for which all these parts work. The school as a whole acts,—originates its program, classes, recitations, sets up ideals and strives to attain them; it, also, when it gets out of order proceeds to adjust its own difficulties. Thus the school is self-acting and self-adjusting.

The Fundamental Law.—When in our study we try to find the thing underlying all the complex activities of the school to which they can conform in order to contribute to the highest success of the school, we find it to be unity. Thus our study leads us to decide that the fundamental law of the school is *the law of unity*. By unity is meant that any act of any of the elements of the school furthers any other act of the same element or of a different element toward the accomplishment of the common end of the

school. It is evident that this is the thing that will contribute to the success of the school always. And it is equally evident that if one element of the school so acts that his activity antagonizes the acts of another element, or other acts of his own that it works against the success of the school,—it breaks the law of unity. From the study so far we get the hint that the problem involved in school management is *the maintenance of the law of unity*. The law of unity is the law of any organism, and since the school is an organism, it is the law of the school.

Source of the Law.—The laws of any organism are inherent in the organism and are not externally imposed. The law that determines that the plumule, the growing point of the stem of a plant, grows up toward sunlight and air, and the law that determines that the radix grows down from the sunlight and air are in the very nature and condition of the plant. No externally imposed conditions can change these laws. The botanist can discover these and many other laws of plant life, but he can make no laws for the plant. No one can legislate for the plant. Legislatures and parliaments might pass a law that hereafter plants should grow, blossom and produce fruit without moisture, sunshine and heat, and all nations of the earth might ratify this law, but the plants would go on in their own seeming stubborn way, and demand for their growth, heat, light and moisture.

The law of the school is as much a part of the

nature of the school as the laws of plant life are of the nature of the plant.

Rules.—The various phases of the law of unity are rightly the rules of the school. Some writers have attempted to make a distinction between the laws of the school and the rules of the school. It has been held that a rule of the school is an externally imposed regulation made by the teacher or some other person, —director, trustee, or superintendent, and that a law of the school is some truth inherent in the nature of the school according to which the various elements act. This is a bad distinction to make, because it is a source of mischief. The right meaning of rule is that it is a minor law. Thus the various phases of the law of unity are the rules of the school. This idea of the law and rules of the school can not be too thoroughly fixed in the lives of the pupils and teachers.

Phases of the Law.—An analysis of the law of unity in the school reveals various ways in which unity is to be sought, the most prominent of which are the following: 1. Unity in the organism as a whole. 2. Unity between teacher and pupil. 3. Unity between the pupil's ideal self and his real self. Each of these will be studied to some extent. Before taking up this study it is worth while to notice that this is only a very general analysis. A close analysis would reveal almost an endless number of phases of the law of unity. For instance, there must be unity

between patrons and teacher; between patrons and children; among school officers; between the school officers and teacher, and between school officers and children. Each one of these unities might in turn be further analyzed.

Unity in the Organism as a Whole.—There is unity in the organism as a whole when every element of it is so acting that each act furthers the influence of any other activity of any element toward the accomplishment of the common end—the education of the child. This thought of what unity in the school as a whole consists of is of the highest importance to every conscious element of the school. If this thought can be so firmly fixed in the minds of each person,—teacher, students, school officers, patrons, etc.,—connected with the school that it will become a part of his life, the problem of school government will be substantially solved. An appreciation of the law of unity in the organism as a whole will reveal to teacher, student, patron, and school officer that it is not students alone who violate the rules of school, but almost as often the teacher, the patron or school board. Our legislators often make what are called “School Laws” that violate the laws of the school, break the unity, and militate against the integrity and efficiency of school work. It is evident that there is a distinction between the law of the school and what often goes into the statutes as the “School Laws.”

When a school board secures a teacher to teach school for any other reason than because of the ability of that teacher to do good teaching, its members break the law of the school. It is a pernicious doctrine worthy of condemnation in the strongest possible terms by all sensible and honest people, that teachers should be chosen from any other consideration than their ability to minister to the lives of their pupils. Poverty, nepotism, machine politics, church influences, and so on, of themselves have absolutely no place in the considerations when a teacher is to be chosen. A school board will hire a teacher year after year wholly incompetent and unfit for a teacher, because she is poor and has an invalid mother; they will not hire competent and proficient married ladies to teach because perchance a married lady who teaches will support a worthless husband. Such school boards are the worst enemies of the children of our schools. There is no economy, no honesty or common sense in injuring the lives of a room full of children, thirty or forty, year after year, in order to furnish a place for an incompetent teacher. One gets heart-sick at the incompetency, dishonesty, or imbecility of a school board that will take into consideration the many things brought to bear to secure places for incompetent teachers even at the disregard of the influence on the growing lives of the school children. The doctrine that sets anything above the welfare of the pupils in the choice of teachers is wholly inde-

fensible. This is doubtless the greatest evil of the American schools today, and the one most far-reaching in influence, pernicious alike to children and to teachers. Thus is the law of the school broken by school boards to their everlasting dishonor and disgrace.

The Power of Sentiment.—By sentiment is meant a feeling for or against anything because of knowledge concerning that thing. Sentiment is a powerful factor in school government. If there is some line of conduct which breaks the law of unity in the school the most potent means of controlling it is to establish a sentiment against it in the school. One has only to look about him to see that life is largely controlled by sentiment. A certain church community has a sentiment against an organ in church, and a pastor comes and lauds the advantages of the church organ. One can easily judge the standing of that pastor in that community. The same sermon might be preached in another community with the most satisfactory results. In a town now in mind every one plays at cards, and any new-comer who refuses to play is regarded as unsociable and ridiculous. The best church people in this town do not object to cards, so to play at cards in this town has no bad effect on one's reputation. In another town now in mind, to play at cards is placed in the category of heinous crimes, so to play at cards here would ruin one's reputation and destroy his usefulness in this

community. What is the difference in the two places? The answer is a difference in sentiment.

The Main Line of School Government.—The main work the teacher has to do then in school government is to establish a strong sentiment as to the following:

1. That the law of the school is inherent in the school because of the pupil's part in the organization.
2. That the pupil as much as the teacher helps to make the rules of the school.
3. That the teacher, patron, or school officer may break a rule of the school as well as the pupil.
4. That the pupil himself helps to keep the law of the school intact as well as the teacher.
5. That the ultimate object of the school is the highest welfare of the student.

If we as teachers can establish a strong sentiment for that which we want in school and against that which we do not want in school the problem of government will then largely take care of itself. Arnold Tompkins says on this point: "The main line of work running through the management of a school is that of developing in the thought of the pupil the laws which are in the school because of his membership in it. This does not require a logical exposition of the theory of the school, but the laws are to be made to appear through the concrete situations of school life. Consultation, formal and informal, on special interests and phases of conduct, is the effective means, even with a class of youngest students. The mere compliment of recognition forestalls opposition and outbreak. But

the best results are not the mere matter of order, but the ethical value to the student: he becomes a student of conduct; he is finding the law of conduct in particular cases, and gradually, as he is able, generalizes them into the law of school conduct; and through this the laws of conduct at large will be revealed to him. And more, it is not merely a perception of law, but there is an habitual practice under the law; not merely his expanding theory of ethical conduct, but his expanding free and virtuous life under that theory. He is immediately and directly involved in every case; and it becomes a question of his own practice, and not a scheme to apply to others. No amount of moral teaching in school can be as effective as a rational practice of school management. By it the school is not only made more real and secure, and the immediate condition for instruction provided, but the pupil is thereby brought to the habit of rational self-control, the end of all ends in school work."

Behavior or Conduct.—Behavior in school is often-times thought of as merely applying to the student, but a true view shows that conduct with reference to the school involves the actions of the teacher, pupil, patron or school officer. And conduct in school is one's bearing toward the unity in the school. Good behavior is that which maintains or tends to maintain the unity in the school, while bad conduct or bad behavior is that which breaks down, or tends to break

down the unity of the school. That which is good behavior in school is right and that which is bad behavior in school is wrong.

Dr. Arnold Tompkins says on the point: "Behavior or conduct in school, whether on the part of the teacher, parent, pupil, or school officer, is the way one bears himself in reference to this vital touch of mind with mind in the act of instruction. A right act in school is one which secures, or tends to secure, unity between the mind of the teacher and the pupil in the teaching process, while a wrong act is one which destroys, or tends to destroy, such unity. School management is the process by which all the acts of all the agents constituting the organism are brought into the unity of the one act above described."

Unity Between Teacher and Learner.—It is in this unity that the life of the pupil comes in vital touch with the life of the teacher in the teaching act. Mr. Tompkins says on this point: "These two (teacher and pupil) in coöperative unity constitute a school, and the law is to be tested in their organic unity. All other parts of the organism work their way down to this unity through these two factors. The prolonged and heroic effort States have made in organizing a school fund is to bring teacher and pupil together under the most favorable conditions for coöperation. The Commissioner of Education must find his way through the long line of forces down to the touch of

teacher with pupil. Library, laboratory, and gymnasium are but unifying agencies between teacher and pupil; and the value of thumb-bell or clock, eraser or wall map, is tested by the influence exerted on the unity of teacher with pupil. Thus the school is quite a complex, but closely integrated, process. Every act performed, however remote, finds its way to the unity described, and is there tested. When the director fails to supply good fuel, or the trustee a good blackboard the unity is weakened. When the county superintendent gives license to a teacher, or the trustee selects one, the value of the act will be tested in the unity of teacher and pupil in the teaching act. The State Superintendent renders a decision, and it ultimately shows itself in the concrete teaching process,—in the unity of mind with mind in the teaching act.” It thus appears that everything in the complex organization of the school exists for the purpose of bringing about the unity between the mind of the teacher and the pupil. This unity shows itself in two ways: 1. At all times both in and out of the recitation the teacher and student, if their minds are in unity, endeavor to conform themselves to the highest welfare of the school as a whole. 2. In the recitation particularly the mind of the student and teacher meet in vital unity. Anything which breaks this unity breaks a vital rule of the school. Hence the wrong in whispering or talking in the class when the work of the recitation is progressing.

Unity Between the Learner's Real and Ideal Self.—

There is unity between the pupil's real and ideal self when each act of his life lifts him from a lower to a higher plane of living; when through his action the *I am* becomes constantly what was the *I ought* just before that act. From this it appears that constant, perfect unity between the real and the ideal selves of the pupils can never be more than approximated, for to attain to such a unity constantly would be an ideal growth toward freedom. To make the pupil conscious that every act of his life leaves a permanent effect and influence on his life, and that every act that brings about the unity between his real and ideal self influences him for good, and that every act that breaks this unity, or tends to break it affects him for the worse, is to make him conscious of the nature of the disturbing struggle in life. It is the most comprehensive problem of human life, the problem broad enough to include every phase of human life. When the child sees the nature of this problem he is naturally unwilling to do those things which will degrade him, but aspires to a higher life constantly. Thus in preserving the unity between the student's real and ideal self, the school is fixing the habit with him of right living under any circumstances. And this,—to give the student the habit of self-control and right self-direction, is the ultimate end of all school government.

Unifying Conditions.—Unity in its various phases

is the proximate as well as the ultimate end to be sought in all school government, but this unity can not be obtained directly. It is to be brought about by producing conditions for unity. So our study brings us to the consideration of unifying conditions. The unifying conditions may be analyzed into several phases, but only the following important phases will be studied: 1. Unifying conditions in the organism as a whole. 2. Unifying conditions of teacher and pupil. 3. Conditions of unity between the pupil's real and ideal self.

Unifying Conditions in the Organism as a Whole.—Unity in the organism as a whole as before defined means that all of the elements of the school are so acting that each act furthers the influence of any other activity of any element toward the accomplishment of the common object,—the education of the child. Now, what is the condition in the school that pre-eminently brings about this unity? The answer to this question is that if the whole complex organization is permeated through and through with the thought that the school is what it is because of the part the child has in it, and that the interest of the child stands paramount to all other interests, this is the condition above all others for unity in the organism as a whole. This thought estimates every act of every element of the school in terms of its ministry to the welfare of the pupil. This means the best is none too good for the child. The best teacher, the

best school house, the best books, the best school board, the best superintendent, and the best apparatus which can under the circumstances be secured are due to the interests of the child. And any school officer, teacher, or superintendent who purposely, or through neglect, does less than exert himself to secure those conditions is not loyal to the charge entrusted to him.

Conditions of Unity Between Teacher and Pupils.—

One of the most important conditions for bringing about the unity between teacher and pupil is the school-room. Here is the place where outward form of unity is maintained. It is the place where students come together for the work of the school, and may be made a positive influence for securing unity. Mr. Tompkins says on this point: "It must be more than a secure, quiet, and comfortable meeting-place for teacher and pupil; it must have a positively elevating influence, bringing the pupil, by its active toning power, into the higher life and mood of unity with the teacher. The pupil comes at once under the combined influence of the presence of the teacher and the more indefinable presence of the school-room.

The school-room must be homelike and cheerful, pleasing and attractive. It should not be bare, hard and repulsive, but filled with sunshine and delight, which makes it more attractive and cheering than the home of the average child. This does not require upholstered furniture and elaborate decorations. Clean

walls, with here and there a well-chosen picture, which can speak to the heart and the mind of the child; neat window curtains; a few flowers; some carpeting,—the more the better; and whatever little matters good taste would suggest.” The general tone of the school-room as a whole has much to do with inducing that attitude of mind favorable to the unity of teacher and pupil.

The analysis of the purpose of the school-room as a unifying condition between the teacher and pupils shows the following: 1. To bring about the personal contact of teacher and pupil. 2. To bring about communicable relations between teacher and pupil. 3. To make the pupil and teacher comfortable. 4. To minimize diverting influences. These four points will be studied briefly in their turn.

Personal Contact.—In the school-room in general and in the recitation in particular the teacher and pupil come into personal contact. It is necessary that pupil and teacher work in the same atmosphere. No good teaching can be done except in the presence of the student. An attempt is sometimes made to teach by correspondence, but such teaching lacks the life, flexibility and power that come from the personal contact of pupil and teacher. In the presence of the student the teacher can adapt his teaching to the moods, attitudes of mind and special difficulties of the individual pupils. Thus only in personal contact with students can the teacher lead the student

to think the thoughts, experience the feeling, and will as he should. Too large schools or too large classes violate the law of unity by militating against the personal contact of teacher and student.

Communicable Relations.—Nothing is more important in teaching than to have the pupils in easy communicable relations. The minds of pupils can not keep in touch with the mind of the teacher in the teaching act unless the pupils can without difficulty see and hear the teacher. If the students must crane their necks to see the teacher's face and gestures, and strain to hear his words, it is safe to say unity will not last long under such conditions. Students will naturally make a few spasmodic efforts under such circumstances to maintain the unity between themselves and the teacher, but the tension being too great, will soon settle down, the unity broken, to await the end of the recitation. Communicable relations demand that the school-room be not too long, nor too broad. Students can not hear the teacher well more than thirty feet, and can not see the teacher well from the sides if the width of the room is more than twenty-four feet. All school authorities are in agreement on these dimensions for a school-room. So from the law of unity in school management as well as from a hygienic stand-point, no school-room should be larger than thirty-three by twenty-four feet.

Comfort of Teacher and Pupils.—Much of the noise

and friction in school arises because the pupils are uncomfortable. No student can be expected to work quietly who is uncomfortable to any great extent. While the school-house is to provide for the comfort of pupils and teachers, many of them certainly fail in this to a remarkable degree. When students and teacher are uncomfortable the unity of teacher and pupil is broken in that the attention is drawn to the bodily discomfort. No teacher or student can do good work under conditions of bodily discomfort. There are, at any rate, four things connected with the school-room which will contribute to comfort: 1. Comfortable seats. 2. Proper temperature. 3. Ventilation. 4. Lighting. Not only from hygienic reasons but from reasons of school government should the seats be of proper pattern, and well adapted to the age and size of the pupils who use them.

Every school-room should have a thermometer hung about four feet from the floor in some part of the room where the air would be at an average temperature with that in the room as a whole, and the mercury should be kept as nearly as possible at from 70° to 72°. The temperature below this, some one will be uncomfortable from cold; and the temperature above this, some one will be uncomfortable with heat.

Plenty of pure, fresh air admitted to the school-room in such a way that no one, teacher or pupil, will be subjected to draughts is certainly essential to

comfort, and since essential to comfort, it becomes a question of school management as well as a question of school hygiene. One point here needs to be reiterated, and that is, that air may become unfit to breathe and at the same time be cold. That the temperature of a room is 70° or below is no guarantee that the air in that room is pure enough to breathe. This is a truth that many janitors seem incapable of learning.

Bad lighting likewise induces bodily discomfort, and so breaks up the unity. Plenty of light should be admitted from the left and from behind the pupils, and in order that a school-room should be well lighted according to approved methods it should not be more than twenty-four feet wide. The study of the questions of seating, heating, ventilating, and lighting school-rooms has usually been discussed from the hygienic stand point, but they deserve consideration also from the view-point of school management.

Minimizing Diverting Influences.—Whatever removes influences that take the pupil's attention from his school work is a condition of unity. Some school-rooms are so situated that all sorts of sights and sounds are constantly attracting the attention of the pupils. The writer has taught in a recitation room near a railroad upon which as many as four or five heavily loaded trains would pass during one recitation period. Just so many times was unity of recitation broken. Again, a school-room situated near a

paved street will often have the unity between the teacher and pupils broken by the rattling of vehicles upon the street. These points are worth considering in choosing a location for school buildings. It is upon the school premises and within the school-room itself that distracting influences may be minimized in particular. These influences are those that divert through: 1. Touch. 2. Sight. 3. Hearing.

Touch.—Minimizing influences which divert through touch demands that all pencils, knives, unnecessary books, apples, pencil-cases, etc., except those in actual use, should be removed from desks. If such things are left on the desk, students can scarcely refrain from handling them. It is also in the light of this thought that the superiority of single seats over double seats becomes so evident.

Sight.—It is imperative that all unnecessary sights be removed from the school-room. Hence the law against students passing from one part of the room to another; to the water bucket; to and from the stove; against any unusual arrangement of school furniture.

Hearing.—The law against distracting influences through hearing demands quiet in the school-room. This is such an important point in school management that especial study needs to be given it. From a mistaken idea that to demand quiet in the school-room is to rob children of their freedom, some teachers not only permit but advocate an intolerable

amount of noise in their schools. Mr. Tompkins says on this point: "Most effective of all means of diverting the attention is noise. Silence must be the law of the school-room. The noise of whispering, studying, fixing fires, walking, loud talk of teacher, etc., must be gotten rid of. It is quite common for the teacher to make more noise than all the pupils together. A teacher should speak in subdued tones, and move about too quietly to attract notice. He should so address a class during recitation that the pupils studying are not compelled to listen. Pencils should be sharpened at recess; and slate frames covered, or slates abolished for note-books.

I know it has been often urged that a noisy school-room is a sign of energy and activity, of industry and hard work; that the working bee-hive must hum. This sounds very well till we reflect that it is physical energy and activity that makes the noise; there is no mental analogy. Rather it is the reverse; the greater the mental activity the greater the silence. The boy who thinks is not necessarily noisy, but necessarily silent. All professional students seek a silent retreat as the best condition for mental labor. This doctrine of a noisy school arises from two classes of teachers,—those who can not secure silence, and seek an escape through the theory; and those who champion in good faith the plea for freedom on the part of the pupil,—or, as it seems to some, a plea for license."

Conditions of Unity Between the Pupil's Real and Ideal Self.—It may be reiterated that there is unity between the pupil's real and ideal self when each act he puts forth helps to fix in him habits of truth and righteousness. This attained would be ideal growth toward freedom. The highest aim of the school is to induce actions in the pupil that will constantly uplift him, and give him the ability to inhibit those which would degrade him, to the end that the growth brought about by these activities may crystallize into character whose elements are scrupulous honesty and integrity, truthfulness, politeness, and justice. But this sums itself up in unity between the pupil's ideal and real self. The conditions of this unity are at any rate three,—1. Pure motives. 2. Incentives. 3. Social influences.

Pure Motives.—The pupil must have right ideas of life, otherwise he can not attain to right living. If the pupil can be made to feel strongly that, when all is considered, there is but one thing in life worth striving for, namely, a high type of manhood or womanhood, the most essential condition of unity between the student's real and ideal self exists. What an opportunity here for the teacher who is what his students ought to become, to help students start right in life! The teacher must have thought out what life's success consists in, it is true, before he can inspire his students to hunger and thirst after truth and righteousness. Right ideas of life and

conduct is the great condition of unity between the student's *I am* and *I ought*.

Incentives.—Incentives are stimuli to urge to activity. They are usually some condition of the self which does not actually exist, but thought to be desirable, and which is held up before the pupil's mind to induce him to perform his tasks. As such, are class grades, per cents, prizes, etc. Incentives readily divide themselves into two classes,—natural and artificial.

Natural Incentives.—These are those effects that in the nature of things result from the performance of worthy deeds. That is to say, natural incentives are the conditions which naturally result from the good deed. The great natural incentive is the soul's inherent desire of progress. The soul awakes to conscious life with the desire of progress as its inmost and strongest trait. The soul's passion for knowledge and righteousness, its desire of development is man's distinctive mark.

“Progress, man's distinctive mark alone,

Not God's, and not the beasts': God is, they are.

Man partly is, and wholly hopes to be.”

This characteristic of the mind in psychology is called wonder. Thus wonder, the natural incentive to progress, is the mind's attitude before a world of things and persons which to know is to realize its own true self. Natural incentives are right, because they are conditions of unity between what the pupil is and what he ought to be.

Artificial Incentives.—These, as the name implies, are not in the nature of things the result of the deed. And if one believes in “the wise economy of nature,” and her laws, he can not consistently believe in artificial incentives. It is doubtful, to say the least, whether artificial incentives are ever truly conditions of unity between the lower and higher self. Under the head of artificial incentives are to be classed, examinations, per cents, rivalry, class honors, and class distinctions, prizes, etc. Mr. Tompkins voices the sentiments of many of our foremost educators when he says: “The use of such means necessarily kills the desire to know, which is immoral because killing the soul itself. When a teacher, in good faith that the natural process of learning is its own sufficient reward, begins to instruct pupils who have been under the artificial stimulus of the per cent. system, he finds them to be indifferent to legitimate appeals, and ready to affirm that school life is not worth living without the usual excitement and strife for per cent. What hope for such pupils after the days of formal instruction! The severest criticism that can be made on school work is to show that students after graduation have not a burning desire to pursue a systematic course of study and improvement. The use of false incentives is not the only reason for this; but it is largely chargeable to formal methods of instruction which necessitate artificial incentives, which further renders instruction dead and formal. By this pro-

cess the pupil, if not becoming positively averse to study, feels satisfied and self-sufficient, and having no foreign incentive now offered, he is under no compulsion to further labor. If study means a contest with ponderable, per centable packages of knowledge, how play the game when there is no one to estimate and umpire? If the school is to determine to a future life of study, the motives appealed to and cultivated in school must be the same as those employed in the natural, healthful course of life out of school." This quotation certainly has much food for thought in it, to say the least. "The abiding passion of the soul is for knowledge, and all the teacher can properly do is to take this fact fairly and at its worth. The passion he may stimulate, make definite, and attach to the proper objects; but he can not introduce a substitute without weakening the life-giving connection between the pupil learning and the object being learned."

Social Influences.—The pupil is by nature a social being, and will live in society after leaving school. In the school in many instances he first begins to learn his duties with respect to others. In all cases the pupil first begins to come fully to the consciousness of what it means to live in society. In the family the student begins to learn something of living in society, but it is in the school that he first meets with the conditions of society in anything like the condition he will be required to live in. The school

forms a transition from the family to the complex social life of the community. Here the pupil learns something of the difference between doing as he pleases and doing so as to lift himself to a higher plane of life and at the same time help those around him. The school has excellent opportunities to teach habits of politeness, order, truthfulness, industry, and justice. But all this is unity between the student's real and ideal self. Thus social influence is one of the conditions in school for this unity.

Broken Unity.—But in the best regulated schools the unity will be broken. This may happen through ignorance, neglect, thoughtlessness, or wilfully. Since prevention is always better than cure, the main line of school government is in preventing broken unity. This is to be brought about by furnishing conditions for unity and eliminating those unfavorable to unity. This consists first, foremost, and at all times in establishing sentiment in the lives of students in favor of those things conducive to unity and against those things unfavorable to unity. However, the unity broken must be restored. And this brings us to the study of,

The Restoration of Unity. If students have in mind (1) the nature of the school; (2) the law of unity; and (3) proper sentiments toward school behavior, most cases of broken unity on the part of students will be spontaneously and voluntarily restored. But

it would be an almost ideal condition of things and one to be always sought for, in which broken unity would be constantly thus restored. Broken unity must be restored by the teacher as an agent. This becomes a not difficult task when the conditions insisted on all along in this study have been established in school. Confidential talks with students by the teacher calling attention to the offense in a sympathetic manner may be used with lasting and beneficent results. Often nothing is necessary but to call the student's attention to the misbehavior. However, obstinate cases will arise which must not be passed by lightly, and this brings us to the question of,

School Punishments.—This is the most delicate as well as the most disagreeable feature of the teacher's duties. However important, a full study of school punishments can not be undertaken here. It should be remembered that punishment is to restore broken unity and that punishment which fails of this can not be considered a success. Punishment must be reformatory rather than vindictive. Plato was surely right when he said only the unreasonable fury of a brute would punish vindictively. The teacher never accomplishes anything helpful to the school who simply by punishment arouses the antagonism of the pupil.

No recipes can be given for particular cases, but the study of nature's punishments enables us to lay down the following principle which is always safe to

follow: *The punishment should be what in the nature of things follows as a result of the offense.* There may be cases where this principle can not be followed, and again it may be very difficult to determine what naturally follows as a result of the offense. But, when at all possible, this principle should guide. It will be noticed that this discussion almost entirely excludes corporal punishment. And this is doubtless what it should do. It is safe to say that corporal punishment has little or no place in the process of restoring broken unity. In ninety-nine cases in a hundred of corporal punishment the teacher thoroughly antagonizes the student. There may be some cases which require corporal punishment, but they are rare.

CHAPTER IX.

THE PROCESS IN THE TEACHING ACT,—METHOD.

The Teaching Act.—The school exists as an organization in order that the most favorable conditions may be furnished for the act of teaching. It is in this act that the mind of the pupil comes into vital touch with the mind of the teacher. Here the miracle of the influence of one mind upon another is manifested. Here it is that an all-important duty of the teacher is involved. To this process all other processes of the school point. The school finds the idea that created it in the process of realization in the teaching act. The act of teaching is a process for it is a series of steps directed toward the accomplishment of an end. The teaching act is not a simple process for it is a large process made up of smaller processes.

The Processes in It.—A brief analysis of the teaching act will show that there are three processes going on in it,—(1) the thinking the learner is doing; (2) the thinking the teacher is doing; (3) a process of handling questions, directions, objects, assignments, and so on—the manipulation of means in teaching. The first two of these processes are spiritual, or mental,

processes, and the third is external to both the mind of the teacher and the pupil and is a physical process.

Illustration.—In teaching the definition of a noun to a student, first, the student's mind goes through the process of thinking (1) that the noun is a substantive word; and (2) that it expresses an object by naming it. This is the process in the mind of the student in the teaching act. Secondly, the teacher thinks these same points through with the student, but he thinks several other things, too. This is the spiritual process of the teacher in the teaching act. Thirdly, there is a process of asking questions, illustrating, possibly referring to text-books, etc., going on, and this is the physical process in the teaching act.

Nature of Method as a Subject of Study.—The question, What is the subject of method like? is often asked. It may be answered in a general way by saying it is a subject of study the pursuit of which has for its special object to make teachers more skillful in teaching than they would be without such study. But this much might be said of any pedagogical study—of psychology, for instance. To be more definite, method as a subject is that study which deals with the three processes in the act of teaching as indicated above. These three processes in their various phases constitute the material of all study in the subject of method.

The Subject-matter of Method.—By subject-matter

is meant the material of study in any subject or lesson. It is the thought and feeling embodied in any subject or lesson which are to be got from such subject or lesson by study. It always consists of facts and relations among such facts. So the subject-matter of method, as a subject of study, is the three processes, one in the mind of the learner, one in the mind of the teacher, and one a physical process, in their relation to the growth in the life of the learner.

Definition of Method.—Method is thus seen to be a complex and comprehensive thing. Any definition to be perfectly accurate, must include the various phases of these three processes. The following, it seems, does this: *Method is the triple process in the act of teaching by which the learner is induced to take the steps from his real condition to a higher condition held up as an ideal.* This is the definition of method considered in its broadest and most comprehensive sense, and the sense in which its study will give the most help to the teacher.

Classes of Method.—Since there are three processes going on in the teaching act there are, in a sense, three methods,—the learner's method, the teacher's method, and physical method. These three will be studied somewhat in detail.

The Learner's Method.—The learner's method is the movement of his mind in gaining any point of knowledge. The pupil's method is thus a living, spiritual process internal to his life. Method from

this point of view is mental growth. That is to say, it is the change of potential mental activity into actual mental activity, and this is the essence of growth.

Illustration.—If the child learns in a number lesson that $8+7=15$, the activity of his mind in thinking the following steps is his method: (1) the mind rethinks the number 8; (2) the mind rethinks the number 7; (3) the mind thinks the number 8 and 7 together; (4) the mind thinks the name of the new number. These four steps are the mind's process in thinking the point of knowledge, and are, therefore, the mind's method. This phase of method calls attention to the fact that the thing to be watched and emphasized in teaching is the change in the learner's life by which he is constantly rising to a higher plane of living.

Definition of the Learner's Method.—This phase of method may be characterized by the following definitions:

1. Method is the process in the learner's mind in thinking a thing.

2. Method is the movement by which the mind of the learner identifies itself with the thought and feeling of the external world. The external world here means anything external to the mind of the learner.

3. Method is the mental activity in which the mind makes the objective the subjective. The objective means the external world, and the subjective

means the self. And the self means one's original capacity to know, to feel, and to will, plus the effect of experiences on this power.

4. Method is the process by which the mind of the learner goes from its real condition to an ideal condition. One's real condition is his condition just as he is at any time. His ideal condition is one different from what he is in at any time, and which actually has no existence except as an idea in the mind; hence the name *ideal*. The ideal condition is not necessarily a better condition than the real, but may be either a better or worse condition.

The Teacher's Method.—The part the teacher performs in the process of teaching is a very important topic of study in the subject of method. This must be thoroughly understood by one who is to succeed best. To study this is to study the teacher's method. And to this we turn.

First, the teacher must think the thought in the point or points to be taught; that is, he must think the *subject-matter*. Secondly, he must see in terms of development of the learner's life the reasons for teaching the subject-matter; that is, he must see the *purpose*. Thirdly, the teacher must see the nearest related knowledge possessed by the learner which he can use as a foundation to build upon in teaching the new point; that is, he must see the *basis*. Fourthly, the teacher must see the activities the learner's mind puts forth in mastering the points of truth in the

subject-matter; that is, he must see the *steps*. Lastly, the teacher must see the means he may best employ in leading the mind of the learner to take the steps in mastering the subject-matter; that is, the teacher must think out the *devices*. Thus the teacher in teaching a lesson must think (1) the subject-matter; (2) the purpose; (3) the basis; (4) the steps; and (5) the devices. These five things every teacher does in some sort of way in teaching every lesson. Some think them out clearly and accurately, and some think them out scarcely at all, and do not know that they do even that much. A teacher can think the teaching of a single point, or of a whole lesson, or of a whole subject, under these five heads, and must do so with more or less accuracy in teaching. It is worth our while to study these five points further for the help the study will give.

Subject-matter.—In a general way the subject-matter is that which is to be mastered by study. It is the thought embodied in the thing studied by the mind of the learner. In a particular lesson the subject-matter is just that to be got from the lesson which the learner should have after the recitation. In a particular subject, as grammar or history, the subject-matter is just that to be got from the subject which the learner should be in possession of after the study of the subject. In this general sense the subject-matter of education is the whole world of thought. This study is too general to be very help-

ful. A closer study will reveal the fact that every subject-matter is composed of two things: (1) The facts to be taught. (2) The relation in which these facts are to be taught or studied.

Illustration.—Suppose the words, *inquiry*, *discourse*, and *aspirant* are to be taught. Now, a spelling lesson might be made of it; and if it were a spelling lesson, the subject-matter would be, the words, *inquiry*, *discourse*, and *aspirant*, as to their correct written or printed forms. Thus the words *inquiry*, *discourse*, and *aspirant* are the facts to be taught or studied, and “as to their written or printed form” indicates the relation in which they are to be taught or studied. But these same facts might be used, and the lesson not be a spelling lesson at all. If the relation they are to be studied or taught in is as to their correct pronunciation the lesson would be one in orthœpy, and the subject-matter would be, the words, *inquiry*, *discourse*, and *aspirant* as to their correct pronunciation.

Further Illustration.—Suppose the facts of the revolution of the earth around the sun are taught, who can say whether the lesson is one in astronomy or one in geography? If, however, these are taught in their relation to the distribution of life, climate and relief forms on the earth’s surface, the lesson at once reveals itself as a geography lesson. From these illustrations it is to be seen that a subject-matter consists of (1) the facts to be taught or studied; and (2)

the relation in which these facts are to be considered. This relation is often called the organizing principle of the subject-matter.

General Statement of Subject-matter.—The statement of subject-matter is not the subject matter any more than a word is an idea, or a sentence a thought. The statement of the subject-matter bears the same relation to the subject-matter that the word bears to the idea and that the sentence bears to the thought; that is, the statement bears the same relation to the subject-matter that the symbol does to the thing symbolized.

The general statement of a subject-matter is very valuable to a teacher, whether it be of a single lesson, or of a whole subject. It is helpful to the teacher because it must do two things: (1) it must name the facts to be taught, and (2) it must tell the relation in which these facts are to be taught. Thus the general statement of the subject-matter of any subject is a perennial guide to the teacher in teaching that subject, in that it shows, in a general way, what to teach and in what relation (how) to teach it.

Purpose.—Purpose in reality is beginning and end in every process. The purpose as idea—the beginning—moves forward in the process to its realization—the end. The purpose exists in the teacher's mind, but it is to be realized in the life of the learner. The purpose is the effect the mastery of the subject-matter should have on the life of the child. In actual

teaching the teacher is to go from the subject-matter by way of comparison of the effect the thinking the subject-matter has on his own mind to its effect on the child's life, which is the purpose. That is to say, there is no way to tell the purpose of the subject-matter except from the effect its mastery produces on the child's life. The course of study—the subject-matter—is usually provided for the teacher. So the teacher must start with the subject-matter and find out the purpose in teaching it. Much depends in the teaching act upon how well the teacher does this. If the teacher has definitely in mind just what he wants to do in the lesson he will be drawn steadily and constantly toward its accomplishment. A definite purpose saves time, economizes energy, emphasizes the important, organizes, and prevents aimless wandering.

It will be seen that in teaching any lesson there are two phases of the purpose: (1) to give knowledge valuable for guidance in living; (2) to give mental discipline; that is, to furnish a mental gymnastic to the end that the mind may grow strong by exercising it.

Basis.—This is the learner's nearest related knowledge to the new points to be taught, and upon which the teacher may build in teaching the new point. Basis is an important point in teaching. Many errors are made in teaching because the learner has not basis for learning the new point, or because the teacher does not see the basis. Teaching in harmony

with the principle underlying basis, *the mind naturally goes to the unknown from the nearest related known*, means a progressive development of a subject, each step becoming basis for the step succeeding it. There are many violations of basis in teaching, as often done.

Illustration.—If the lesson to be taught is that $5+4=9$, the child must know the number 5 and the number 4 as basis before he could learn that $5+4=9$. If the teacher should attempt to teach this lesson without having taught the numbers 5 and 4 he would meet with the difficulty of insufficient basis. Again, if a teacher attempts to teach the noun to a class without the class having a definite knowledge of an object, he will most surely meet a difficulty in the basis. The teacher to teach well must see and choose definitely his basis.

Steps.—Steps are more or less complete movements of the mind. They are mental things and in the teaching act are in the life of the learner. They are the advances of the mind in mastering the separate points of the lesson to be learned. Or in a more general sense they are the advances of the mind in mastering the various phases of a subject.

Illustration.—If the lesson to be taught were that $17-8=9$, the steps would be: 1. The advance of the mind in rethinking the number 17; 2. The advance of the mind in rethinking the number 8; 3. The advance of the mind in thinking the number 9 as remainder.

Again, if the lesson were, to teach the definition of the triangle, after examining several triangles, the steps would be: 1. The advance of the mind in thinking that a triangle is a figure. 2. The advance of the mind in thinking a triangle has three sides. 3. The advance of the mind in thinking a triangle has three angles. 4. The advance of the mind in synthesizing these points in the definition, *A triangle is a figure having three sides and three angles.*

To know the steps the mind takes in working out any new lesson is a matter of much importance to the teacher. He must know something of the steps or he can not teach at all; and, other things equal, the more clearly the teacher has thought the steps, the better will he teach the lesson.

Devices.—The devices are the various things used by the teacher to lead the mind of the learner to think and feel in the manner desired. A synonym for devices is the term *means*. Devices, or means, constitute a very important factor in teaching. There is opportunity for the exercise of rare judgment, tact and skill in the selection of devices. When it is understood that questions, text-books, and reference books, maps, globes, and school apparatus in general; blocks, sticks, etc., are devices in teaching, something of their importance in school work becomes evident. Devices are so important that among many, method means nothing more than the manipulation of devices. However important they are it must not be lost sight

of that they are always determined in the light of the mental process they are to induce. They are means to an end, and in nature the end is always more important than the means.

Method as a Physical Process.—It is, perhaps, using the term *method* in its most popular significance to think of it as meaning some physical process external to the life of the learner. That is to say, it is using the term in the sense in which most persons commonly use it in speaking and writing. This idea of method is the one usually held by persons who have not made any careful study of what the term really ought to mean. There is a sort of indefiniteness in the minds of most of such persons as to just what they do mean by method. However, upon examination it will be found usually that the idea that method is the manner of doing some physical thing prevails, though even this is held in mind more or less vaguely. From thinking of method in this sense we have the following terms: "Object Method," "Concert Method," "Consecutive Method," "Promiscuous Method," "Socratic Method," and "Laboratory Method."

These all refer to the manipulation of objects, questions, and answers in the teaching act, and so are to be studied briefly under method as a physical process.

The Object Method.—By this is meant a handling of objects by teacher and pupils in the process of

learning. It is a good line of work, if used judiciously. It has its proper place in teaching number work, primary geography, and primary language.

The Concert Method.—The concert method means having students to answer questions, read and speak simultaneously in the recitation. There is much that may be said against concert work, but very little to be said for it. It is objectionable because it (1) violates the law of self activity; (2) stifles individual effort and individual responsibility; (3) does not bring out clear, definite answers or thinking; and (4) leads to confusion, disorder, and chaotic class work. There may possibly be instances in which concert work may be used advantageously, but as a rule it should be avoided.

The Consecutive Method.—The consecutive method of asking and answering in the recitation means beginning at some point, the head of the class, or at the name beginning with *a*, and proceeding in some regular order back to the point of starting. In proceeding in recitation this way the students know pretty well when the "turn" of each one comes. This method, like the preceding one, has many things against it, but little to recommend it. It is objectionable because it leads to (1) habits of inattention; (2) disorder and disorganization of the class; (3) habits of idleness; and (4) bad methods of study. However good a student may be, if, when he has answered a question, he knows to a certainty that he

will not be called upon again for some time, the tendency is for him to relax his attention. If the student is not a good one, the tendency in this kind of work is for him to become worse, and since he is not called upon to attend closely he is prone to do something else, thereby causing disorder and disorganization. Idleness in the class is a direct result of inattention, and bad habits of study result from the student's being able to prepare just those points in the lesson which he has reckoned will come to him.

Promiscuous Work.—The promiscuous method of asking questions and receiving answers refers to distributing the questions and receiving answers from students promiscuously. No student knows to whom the answer to the question will fall. This method unlike the two preceding has much to be said for it and little or nothing against it. It is desirable because (1) it fosters habits of attention and concentration; (2) it is flexible and gives the teacher the best opportunities for meeting the needs of individual students; (3) it fosters habits of order and organization in the class work; and (4) it tends to industrious habits and right methods of study. By the use of the promiscuous method students are held constantly to attending to the question under consideration, to the careful preparation of the lesson as a whole, and to order and unity in the class. As a rule, the promiscuous method is certainly the best for class work.

Catechetical Method.—This is, in its original form,

not much used any more, and so needs very little said about it. According to this method the question was written in the text-book and just after the question was the answer to it. The student's business was to read the question, and then commit to memory the answer. In the recitation the teacher with text-book in hand read the question and the student gave, in the words of the text, the answer. Such a manner of conducting a recitation has nothing to recommend it and so needs no further study.

Lecture Method.--The lecture method refers to teaching by means of talks or lectures. This method, perhaps, has its advantages and disadvantages. It is certainly not adapted to all kinds of school work, and probably not adapted to any kind of school work if used exclusively. There are, however, some phases of school work which may be profitably taught by talks, or lectures. To elementary school work the lecture method is not at all adapted, and but very poorly adapted to secondary school work. In the first eight years of the child's school life he must be taught differently than by this method. That stays with the child which he has an opportunity to see, hear, and think about. This, however, is not to be construed to mean that oral teaching should not be done in primary history, primary geography, nature work, etc. If the lecture method has any legitimate place in school work, it is in college and university work. However it may seem theoretically, it re-

mains as a fact that those things which are digged out by the student, recited upon in the class, and discussed by questions and answers are the things which in the end stay with him and do him good. Certainly the lecture method in the average teacher's school work is, to say the least, to be used sparingly, and with much caution when used at all.

The Socratic Method.— This method takes its name from Socrates a Greek philosopher and teacher born 469 B. C. It is sometimes called the developing method. It proceeds by the employment of subtle questions to lead the student to think what it is desired for him to think without telling him anything. "The Socratic method, more or less perfectly understood, has had great influence upon professional pedagogy. In many schools for the professional training of teachers, and in many schools in charge of teachers professionally trained, systematic questioning of this sort is looked upon as ideal teaching; and there is no lack of conscientious endeavor to prepare for use in recitation, series of questions which shall lead the child's mind to take the logical steps which given occasion requires. One who doubts the value of such systematic questioning may usually be converted by hearing a single typical recitation conducted by a master of the art. The power of such a recitation to touch, move, chasten, and direct the soul is so evident, that if Socrates and Plato had taught us nothing but how to do such work their fame as

teachers would be justified." It is noteworthy that the "Socratic Method" is diametrically opposed to the "Lecture Method."

The Laboratory Method.—This is also often called the "Scientific Method," and it means a procedure in which the student is lead to investigate and think for himself. It is opposed to taking things on mere authority without investigation, and to the text-book method. It proceeds by leading the student to deal with the actual material of study rather than to deal with what some one has said about it. In botany, studied in this way, the student deals with plants; in zoology, with animals; in grammar, with sentences and parts of sentences. This method has much to recommend it. 1. It fosters habits of free inquiry and free investigation. 2. It is the mind's natural way of learning. 3. It makes the student self-directive and self-helpful. 4. It fixes with the student right methods of study. 5. It gives the student a critical attitude of mind. All these are very desirable characteristics for a student to have.

Comparison of Teacher's and Pupil's Method.—These two methods are alike as follows: 1. They are both spiritual processes. 2. The mind of the learner and the mind of the teacher in general go through the same process in thinking the thing to be learned. 3. Both the teacher and the pupil keep in mind to some extent the purpose of the process in the teaching act.

These two methods are different as follows: 1.

The teacher, in addition to thinking the truths to be learned, must think the learner's thinking of them. 2. The teacher must think out the means or devices to be used in leading the learner to think the desired points of truth. 3. While both the teacher and the pupil keep in mind the purpose, the teacher sees it definitely, or should do so, while the pupil only sees it vaguely. The teacher's method thus includes more than the learner's.

Two Views of Method.—The foregoing study suggests to us that there are two views of method. It is unfortunate that educational writers hold these two views, as considerable confusion prevails because of this fact. One class of educators, those who have studied method least, mean by method simply the physical process in the act of teaching. A second class, those who have been special students of method, mean by method the triple process in the act of teaching.

Comparison of the Two Views.—In our study of method we may call these two views respectively the *popular view* and the *special view*. The popular view will thus designate method as the manipulation of external means, or devices, and the special view will designate method as the triple process.

Thinking of method according to the popular view constantly places the mind's emphasis upon something external to the life of the learner. This has in the past led to much that was bad in teaching

and is still doing so. The teacher loses sight thus of the fact that it is in the learner's life that the educating process is to be carried on. He is prone to make the manipulating, the text-book, or some petty scheme of teaching an end instead of a means. Every question that arises concerning teaching must be settled in the light of the effect upon the life of the learner. The ultimate question is, How does it affect the life of the learner? The process in which the mind of the learner masters the new point of knowledge is the point of prime importance in the teaching act and the thing always to be emphasized in the study of the act of teaching. The popular view of method leads to almost helpless confusion. Every one holding this view who happens to use some different device, or means, in teaching calls it his method and gives it a name. Since there is an almost infinite number of devices which may be used, there thus arises an almost infinite number of methods, which no teacher can or desires to keep informed upon. This leads to a hopelessly chaotic condition of things in the study of method.

The popular view of method has led to much disparagement of the study of method among persons who should be friendly to its study. These are oftentimes persons who are very good thinkers, but who have not given special study to method. It is a common remark among this class of teachers, that one may study method in a subject at the expense of

a knowledge of that subject. The depreciating remarks made about method, which arise from the popular view of method, are a source of much harm to the profession of teaching. This is true, because many persons who would make a careful study of method and would receive the benefit that must come to the teacher thereby, are kept from beginning the study by this disparaging attitude on the part of some teachers. It may be safely said that there is need for no one thing among teachers more than an intensely professional spirit. It seems strange that some teachers take pleasure in saying depreciating things about method work. It is, however, probably to be explained from a misconception of method. I have never yet heard the first person speak depreciatingly of method, who has been a student of the subject.

The special view may be proven to be the better view. This is the argument: A thing is good accordingly as it realizes the purpose which brought it into existence. Method as a subject came into existence to supply the want for something the study of which would help the teacher to do better work in his daily teaching. Accordingly, that thing whose study helps the teacher most is the best. It has already been shown that the study of method as a triple process is more helpful to the teacher than the study of method as the manner of manipulating some

external means or devices. Therefore, the special view is the better view of method.

No Danger in Too Much Study.—It is not difficult to see that there is no danger of a teacher's devoting too much time to the study of method when one takes the proper view of method. The teacher can not study the process through which the mind goes in mastering any point of knowledge until he has the knowledge himself. For instance, the teacher can not see the mental steps the mind of the learner takes in learning the definition of an adjective without knowing the definition of an adjective himself. To know the method in teaching the definition of an adjective is to know two things: 1. The definition of an adjective. 2. The process the mind naturally employs in learning the definition of an adjective. No teacher can rationally and well teach the adjective who does not know these two things.

Further Illustration.—In the teaching of history this point becomes quite evident. The teacher who knows method in history knows these two things: 1. The events of mankind in their relation to the struggle of the race for freedom. That is to say, he must know history. 2. The natural processes of the mind in learning history. No teacher can teach history at all without a knowledge of the first, and it is equally clear to any person who will think, that no one can teach history well without a knowledge of the second.

So this question resolves itself into the following:

it is not possible for a teacher to study method too much, unless it is possible for a teacher to know too much about his subjects and to know too well the mind's natural process in learning those subjects.

Factors Determining Method.—Nearly twenty years ago one of our foremost educators said, 'The law in the mind and the thought in the thing studied determine the method.' This statement can not well be improved upon. And it reveals the two factors which determine method. They are (1) the law in the mind; (2) the thought in the thing studied. It is to be noticed that it is the law of the mind; that is, the general truths of mental activity—the forms of activity common to all minds. Each mind has individual traits, but in general, all minds act in the same way. The laws of mind are the forms of activity common to all minds. Each thing is the embodiment of thought. That is to say, each thing expresses thought. Longfellow's "Evangeline," the ink-stand, the maple tree is each the embodiment of thought.

Illustration.—Holding in mind that method is the mind's process of learning, we can readily see that the process is different in learning different things, or largely the same in learning things much alike. The activity the mind puts forth in learning the definition for the noun is very different from that put forth in getting the thought and feeling from Tennyson's "Bugle Song." One cause of the difference is, that there is a great difference in the thought em-

bodied in the two things. This illustrates that the thought in the thing studied is a factor in determining the method. Again, a child of six could not under any set of circumstances solve a difficult geometry problem because it would violate the laws of the mind. He could on the other hand learn that the printed word *hat* represents the idea hat. Thus in this case the law of the mind would determine the method.

The whole study of method should emphasize the truth that the essential thing in teaching is opening up the way for the realization of the child's inherent possibilities.

“Truth is within ourselves; it takes no rise
From outward things, what e'er you may believe
There is an inmost center in us all,
Where truth abides in fulness, and around,
Wall upon wall, the gross flesh hems it in,
* * * * * * And to know
Rather consists in opening out a way
Whence the imprisoned splendor may escape,
Than in effecting entry for a light
Supposed to be without.”

CHAPTER X.

THE RECITATION.

The Nature of the Recitation.—The word *recitation* is of Latin origin and literally means a reading aloud. As the term is used now somewhat of the literal meaning may be found in it. It is commonly thought of now as the school process in which the student rethinks what he has learned previously and communicates this to the teacher and his fellow students. This is not all there is in the recitation, but it constitutes a considerable part of the process. In addition to the student's process of rethinking and communicating to the teacher what he has previously learned, there are in the recitation the suggestions, tests, directions and encouragement by the teacher. The recitation is the crowning process of the school organization. It is here more than any other place that the miracle of learning is stimulated. Good recitations are the test of good school work.

Purposes of the Recitation.—The purposes of the recitation are as follows: 1. To furnish a place of meeting where the mind of the learner and the mind of the teacher may come into living touch under the most favorable conditions. 2. To test the learner on

his preparation and understanding of the subject-matter of the lesson. 3. To supplement the knowledge of the subject-matter the student has gained in his preparation. 4. To give an insight into right methods of study. 5. To approve, encourage, inspire, and stimulate the student in his work. It is worth while to take up each of these purposes for a brief study in order that they may be more clearly understood, and may be emphasized.

Vital Contact of Pupil's and Teacher's Minds.—In order that instruction may be most effective the act of teaching must be done under the most favorable circumstances. For it is in the act of teaching that the life of the teacher comes into closest touch with the life of the pupil. That these conditions may be most favorable the class should recite in a separate room from that in which the school is seated. Since this is not possible in so many schools, the next best thing is to have the pupils to occupy a position in the room as nearly isolated from the other students as can be. Separate recitation rooms are the best, for there the most favorable conditions exist for bringing the mind of the learner in touch with the mind of the teacher in the teaching act.

Testing on Preparation of Lesson.—Good teaching requires that some definite thing be demanded daily of the learner. And the requirement of tests on preparation and knowledge of what is demanded is imperative. The responsibility of getting up before

the class and making recitations is a constant spur to the student in his work. Remissness in study always results from assigning lessons upon which students never recite. There is no surer way to induce bad habits of study than to assign lessons and then not test the students as to their preparation and knowledge of these lessons. And this is true of all students. The responsibility of preparation is brought home to the student in no other way so well as in the class room at recitation. Every one knows how prone he is to neglect work he has planned because of lack of a definite responsibility. The testing to be most helpful must be accurate, critical and just. Students are often deceived into thinking they have prepared their lessons when they have not, because the testing is not well done in the recitation. If a student neglects to prepare his lesson, he should be brought face to face with his ignorance caused thereby.

Supplementing the Knowledge of the Lesson.—It is not to be expected that the student will at all times completely master the subject-matter of the lesson. Points more or less vague will be cleared up by the recitations of other students or by illustrations of the teacher. Points the student has not been able to work out will often become clear to him upon asking him questions which lead to their solution. And again there are points which the student can get from no other source than from the teacher. These

the teacher should give directly to the student, and save time and guessing on the part of the student.

One purpose of the recitation certainly is to supplement the knowledge the student gets from his preparation.

Giving an Insight Into the Right Methods of Study.

—It often happens that students are willing to prepare their lessons, but they do not know how to study. The teacher has opportunity in two ways to show the students how to study. First, by his requirements in the daily recitation work. If the student is constantly held accurately to the careful preparation of each point assigned, he will soon come to understand what it means to prepare a lesson; and from what is worked out on the separate points, he will see what is expected to be done with each point. Secondly, the teacher may actually and directly discuss how to proceed in the preparation of the lessons. This the teacher must do from time to time.

Approving, Encouraging, Inspiring and Stimulating.—Young people and old are often-times bettered by a word of approval. The teacher's opportunity for approving of that worthy of approval, and disapproving of that not worthy of approbation is a means in his hands of working much good. Teachers are too ready to disapprove of the bad and let the meritorious pass by as if unnoticed. Every child is capable of something worthy, and should be made to feel so. There is certainly a place in the recitation

for approval, encouragement, and inspiration. The teacher who can so teach that his pupils will be inspired to study his subjects after leaving school, in the pursuit for truth and righteousness is a successful teacher.

The Law of the Recitation.—The law of the recitation is the same as the law of the school; that is, *the law of unity*. Without any unity between teacher and pupils the recitation could not be, but it often actually exists with various degrees of unity. When the minds of all the students are following the mind of the teacher as the recitation progresses there is ideal unity. To approach this condition of things is always to be sought; and, other things equal, the recitation will be successful in the degree to which this is attained. Either teacher or pupils may break the law of unity in recitation. Whispering, while not wrong in itself, is a positive sin when engaged in during the recitation. And if sin is the transgression of law, he who whispers during the recitation is a sinner, for he has broken the law. It is to be deplored that there is any teacher in the land who can not see his way clear to setting the stamp of disapproval on whispering in school. It is absolutely indefensible. But there are many ways of breaking unity in the recitation. The teacher may break the unity by conducting the recitation in such a way that there can not by any possibility be unity. The following quotation will illustrate: “Here is a picture taken from life: School-

room of two grades (seventh and eighth), of about twenty pupils each. Good teacher, as the world goes; lesson in denominate numbers by the seventh grade. Teacher directs one boy to pass to the board and solve the first problem; another the second; and so on till the ten problems are used. Then, commencing again with the first problem, re-assigns the ten problems severally to the next ten pupils. A few pupils remain without work, and these are given selected problems to work at the desks, the board all being occupied. The teacher now steps back to talk to the visitor while waiting developments. Things always develop rapidly under such circumstances; and soon the teacher is needed by a girl working at her desk, where teacher and pupil discuss the problem. Note here that it is all right for teacher and pupil to talk during the recitation, because the teacher makes the rules: two pupils must not talk; except to help each other, as they say. And this they soon do, for the bright girl points the way to the dull boy. The first boy has done his sum; and, rather than waste time, punches the fire, which is already too hot. Another bright lad cultivates the fantasy and freehand drawing; while some laggards toil on, with and without help, hopeless, and despairing of victory before time is called. The first boy explains to those who have done their work, while others toil on. Fill out the picture at your leisure. In all it

was a splendid display of self-activity, free thought, and free speech.

What would the teacher have gained if he had required all the problems to be put in neat form of process on slates or note-books; so that at the recitation he might have done something like this: called on the class as a whole for the first step in the problem, permitting one to speak for the class; then have said, 'Take the step,' calling on one to speak for the class again; and thus moving rapidly till all problems were solved?"

The law of unity in the recitation demands short recitation periods. When the minds of the students become fatigued to any great extent, it is impossible to maintain the unity. Forty minutes is probably long enough for any recitation period and in the case of young pupils it should be much less, its length depending upon the development of the student.

The Teacher's Preparation for the Recitation.—No teacher can do his best work without making daily preparation for his recitation. This preparation by the teacher is called *lesson planning*. And by lesson planning is meant the process on the part of the teacher of working through each lesson a short time previous to teaching it, to the end of teaching it well. In short, it is the teacher's immediate preparation for teaching each lesson. Daily lesson planning is an absolute necessity to the teacher who will do the best teaching of which he is capable. No teacher

should ever go before his class to teach a lesson without having studied it through for this particular recitation. This may seem too much of a requirement to some teachers, since it will of necessity demand many sacrifices by them. To those who object on this ground, it may be said that the lives of the children demand just this sacrifice and more, and that those who are unwilling to give it should relinquish their claims as teachers to those who are willing. Also, according to the law of the survival of the fittest these very teachers in the struggle for excellency will be pushed to the rear that their places may be occupied by those more worthy.

The teacher having planned his lesson, comes to the recitation full of expectation and interest to see if all things will work out as thought out when planning. And according to the law of sympathy a good way to interest children in working is for the teacher to manifest intense interest. This is but one of the many benefits that come to the teacher from lesson planning.

But the teacher's intentions may be excellent, and yet he may not succeed well because he has no systematic way of planning his lessons. In other words the teacher may see the necessity of lesson planning, but may not know how to plan a lesson. It will be remembered that under the head of "*The Teacher's Method*," our study showed that in the teaching act the teacher must think through (1) the sub-

ject-matter; (2) the purpose; (3) the basis; (4) the steps; and (5) the devices. Lesson planning systematically done means thinking out as accurately as possible just these five things before attempting to teach a lesson.

Some teachers say they can depend upon the inspiration of the moment in teaching. But the worst failures as teachers are those who attempt to depend upon the inspiration of the moment and find that the moment comes and goes without the inspiration. Inspiration is not a thing so easily got as to come along to help out the teacher who has not prepared himself for his recitation.

Manner of Conducting the Recitation.—The manner of conducting the recitation is a very important point in teaching, for upon it depends to a large extent the teacher's success or failure. The teacher who has a mild pleasant way of leading his students in recitation inspires them with confidence, respect and love, while the loud, boisterous, spasmodic teacher fails in securing those very necessary attitudes of his pupils' minds.

Recitations should be both oral and written. The oral should doubtless predominate, but written recitations are also very necessary. This is true because the pupils will be called upon in life both in and out of school to communicate their thought and feeling in both oral and written discourse. To know is good, but not sufficient. It was said a long time

ago that he who does not know is an ignoramus, but he who knows, and can not communicate what he knows and feels is a dumb statue. Certainly recitations should be conducted both orally and in writing, the oral recitation predominating.

All of the following ways of manipulating questions and answers have been used in recitation work: (1) concert work; (2) consecutive; (3) promiscuous; (4) catechetic; (5) Socratic; (6) lecture. These have been called methods of conducting the recitation. This is using method according to the popular view. It is worth while to study briefly each one of these methods of conducting the recitation.

Concert Work.—Concert work has reference to the students' answering questions, reading, etc., simultaneously. There is much to say against it, but very little to be said for it. It is objectional because it (1) violates the law of self-activity; (2) stifles individual effort and individual responsibility; (3) does not bring out clear, definite answers or thinking; and (4) leads to habits of confusion, disorder, and chaos in class work. There may be instances in which it can be used to advantage, but, as a rule, answering questions, reading, etc., simultaneously by the students is to be avoided.

Consecutive Work.—The consecutive method of asking and answering in the recitation means beginning at some starting point, the head of the class, or at the name beginning with A, and proceeding in

some regular order back to the point of starting. In proceeding in recitation this way the students know pretty well when the "turn" of each one comes. This method like the preceding one has much to be said against it, but not much to be said in its favor. It is objectionable because it leads to (1) habits of inattention; (2) disorder and disorganization of the class; (3) habits of idleness; and (4) bad methods of study. However good a student may be, if, when he has answered a question, he knows to a certainty that he will not be called upon again for some time, the tendency is for him to relax his attention. If the student is not a good one, the tendency in this kind of work is for him to become worse; and since he is not called upon to attend closely he is prone to do something else, thereby causing disorder and disorganization. Idleness in the class is a direct result of inattention, and bad habits of study result from the student's being able to prepare just those points in the lesson which he has reckoned will come to him.

Promiscuous Work.—The promiscuous method of asking questions and receiving answers refers to distributing the questions and receiving answers from students promiscuously. No student knows to whom the answering of the question will fall. This method unlike the two preceding has much to be said for it and little or nothing to be said against it. It is desirable because (1) it fosters habits of attention and concentration; (2) it is flexible and gives the teacher

the best opportunities of meeting the needs of individual students; (3) it fosters habits of order and organization in the class work; and (4) it tends to in-industrious habits, and right methods of study. By the use of the promiscuous method all students are held constantly to attending to the question under consideration, to the careful preparation of the lesson as a whole, and to order and unity in the class. As a rule the promiscuous method is certainly the best for class work.

Catechetical Method.—This is, in its original form, not much used any more, and so needs very little said about it. According to this method the question was written in the text-book and just following it, the answer. The student's business was to read the question, and then commit to memory the answer. In the recitation the teacher with text-book in hand read the question and the student gave in the words of the text, the answer. Such a manner of conducting a recitation has nothing to recommend it and so needs no further study.

Lecture Method.—The lecture method refers to teaching by means of talks or lectures. This method perhaps has its advantages and disadvantages. It is certainly not adapted to all kinds of school work, and probably not adapted to any kind of school work, if used exclusively. There are, however, some phases of school work which may be profitably taught by talks, or lectures followed by questions on them. To

elementary school work the lecture method is not at all adapted, and but very poorly adapted to secondary school work. In the first eight years of the child's school life he must be taught differently than by this method. That stays with the child which he has an opportunity to see, hear, and think about. This, however, is not to be construed to mean that oral teaching should not be done in primary history, primary geography, nature work, etc. If the lecture method has any legitimate place in school work, it is in college and university work. However it may seem theoretically, it remains as a fact that those things which are digged out by the student, recited upon in the class, and discussed by questions and answers are the things which in the end stay with him and do him good. Certainly the lecture method in the average teacher's school work is, to say the least, to be used sparingly, and with much caution, if used at all.

The Socratic Method.—This method takes its name from Socrates, a Greek philosopher and teacher, born 469 B. C. It is sometimes called the developing method. It proceeds by the employment of subtle questions to lead the student to think what it is desired for him to think, without telling him anything. "The Socratic method, more or less perfectly understood, has had great influence upon professional pedagogy. In many schools for the professional training of teachers, and in many schools in charge of teach-

ers professionally trained, systematic questioning of this sort is looked upon as ideal teaching; and there is no lack of conscientious endeavor to prepare for use in recitation, series of questions which shall lead the child's mind to take the logical steps which given occasion requires. One who doubts the value of such systematic questioning may usually be converted by hearing a single typical recitation conducted by a master of the art. The power of such a recitation to touch, move, chasten, and direct the soul is so evident, that if Socrates and Plato had taught us nothing but how to do such work their fame as teachers would be justified." It is noteworthy that the Socratic method is diametrically opposed to the lecture method.

Assignments.—While assignments are properly to be regarded as devices in teaching, and while devices have already been studied, they are so important in teaching that we are justified in studying them as a separate topic. There is no other device in the hands of the teacher that can be used so effectively as assignments. Clear, definite, logical assignments bring clear, definite, logical thinking. On the other hand bad assignments bring bad recitations and lead to bad habits of thinking. As a rule a teacher will get just about as good recitations as are good his assignments. The teacher by skillful assignments can lead his pupils to think almost anything he wants them to think. Most of us can remember when the teacher

said as the assignment, "Take the next lesson." And it is no trouble also to remember that we did not know how to take it, when to take it, or where to take it, and that we were no better after taking than before taking. The most powerful means in the hands of the teacher for making his work a success are the assignments.

Common Errors in Conducting the Recitation.—The following are some of the most prevalent errors which teachers are prone to fall into and which teachers should studiously avoid: 1. Giving assignments not sufficiently definite. 2. Permitting students to wander from the question. 3. Repeating questions before giving students time to answer. 4. Repeating the answer. 5. Calling on the student before asking the question. 6. *Talking too much.* 7. Not holding the attention of the whole class. 8. Calling too much upon the bright students for recitation.

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